

Mid Wales (Powys) Conjoined Wind Farms Public Inquiry

Strategic Transport Hearing Statement

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1 Introduction

- 1.1 Session 4 Cumulative Effects of the Inquiry commences with a Strategic Transport Hearing Session lead by Kevin Martin of AECOM on generic evidence associated with AIL and non-AIL transport.
- 1.2 This Statement has been prepared by Kevin Martin (representing Llanbrynmair) to assist discussion during the Hearing Session. The Statement has been adopted by Stuart Atkinson (representing Carnedd Wen), Peter Mansell (representing Llanbadarn Fynydd) and David Tucker (representing Llandinam).
- 1.3 The Statement considers:
 - The transport route from Ellesmere Port to SSA B comprising those sections of the Strategic Traffic Management Plan (sTMP)
 - The delivery process for Abnormal Indivisible Loads (AILs)
 - The cumulative impacts of construction traffic on the Strategic Road Network

2 Strategic Traffic Management Plan

- 2.1 National Policy Statement for Renewable Energy Infrastructure (EN-3), (July 2011) paragraphs 2.7.80 to 2.7.83 sets out guidance on what mitigation measures may be necessary and how a co-ordinated approach (applicants working together) may be undertaken to ensure, inter alia, that the timings and deliveries of abnormal loads can be managed to minimise disruption to other highway users. The NPS states that this can be achieved through the active management of delivery schedules through the abnormal load approval process.
- 2.2 Paragraph 2.7.82 is particularly relevant:
- “Where cumulative effects on the local road network or residential amenity are predicted as a result of multiple wind farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised and the timings of deliveries are managed and coordinated to ensure that disruption to local residents and other highway users is reasonably minimised. It may also be appropriate for the highway authority to set limits for and coordinate these deliveries through active management of the delivery schedules through the abnormal load process. Once consent for a scheme has been granted, applicants should liaise with the relevant local highway authority (or other coordinating body) regarding the start of construction and the broad timing of deliveries. It may be necessary for an applicant to agree a planning obligation to secure appropriate measures.”*
- 2.3 The wind farm industry has responded positively and constructively towards ensuring that the delivery of large components for the wind farms in mid Wales can be managed in a coordinated way. RenewableUK Cymru (RUK), acting on behalf of its subscribing members, has consulted widely on a strategic Traffic Management Plan (sTMP) (Document CD-COM-TRA-001) for access to areas SSA B and C from Ellesmere Port whilst some developers have established other Traffic Management Plans (TMP) from alternative ports of entry. The intention will be that all of the Traffic Management Plans should aim to adopt the same underlying principles including a range of mitigation measures to facilitate safe and convenient movement of ALLs.
- 2.4 The purpose of the sTMP is to establish a protocol, with associated physical works, to prevent the occurrence of potential traffic and transport effects. The works include the creation of lay by areas

(passing places), lay over areas and physical works required as a result of swept path and vertical alignment analysis.

2.5 The sTMP is presented in modular format to enable different sections of the route to be considered separately.

The six sections of the report are as follows:

- Section 1 : Overview Report
- Section 2 : Ellesmere Port to Welshpool
- Section 3 : Welshpool to SSA B (North)
- Section 4 : Welshpool to Newtown
- Section 5 : Newtown to SSA B (South)
- Section 6 : Newtown to SSA C

2.6 This Statement, and the Hearing Session, does not consider Section 6 of the sTMP. This is the subject of separate formal evidence.

2.7 The sTMP does not consider the impact of general construction traffic on the public highway network or the total number of convoys moved.

2.8 The impact of general construction traffic is considered in Section 4.

2.9 The strategy for AIL delivery times is reported in the sTMP as follows:

Convoys will travel during hours of daylight for safety reasons.

Newtown

- Initially convoys are planned to move through Newtown before 7am on a weekday
- No more than one convoy per day will be moved through Newtown between 7am and 7pm on a weekday

Welshpool

- Convoys are planned to move through Welshpool between the morning and lunchtime peaks on a weekday

- No more than one convoy will be moved through Welshpool between 7am and 7pm on a weekday

Convoys may also be moved through Welshpool before 7am and through Welshpool and Newtown at weekends or after 7pm on a weekday.

2.10 However, Welsh Police have subsequently indicated that only one convoy per day can be accommodated resource-wise. There, is therefore, no daily cumulative AIL impact to consider.

2.11 The AIL delivery process is considered in Section 3.

2.12 Ellesmere Port is the nearest suitable UK port for access to SSA B and C. It has excellent links to the M53. The strategic route then follows the A55/A483/A5/A483 route to Welshpool.

2.13 The strategic route diverges at Welshpool:

- B4381 through Welshpool - A458 – SSA B (North)
- A483 to Newtown – A489 Llanidloes Road – A470 – SSA B (South)
- A483 to Newtown – A489 Llanidloes Road – Mochdre Industrial Estate – A483 - SSA C

2.14 The selection of Ellesmere Port as the preferred port of entry complies with the Highway Agency's Water Preferred Policy (Document CD-COM-TRA-005). This requires abnormal loads to be delivered to the port nearest the destination site in order to minimise road mileage making sure the most appropriate roads are used. An assessment of Ellesmere Port in relation to the Water Preferred Policy has been undertaken and confirms its suitability (Document CD-COM-TRA-004).

2.15 The route from Ellesmere Port follows the trunk road network as far as is reasonably practical. In general, the trunk road network has been designed to carry greater volumes of traffic, and so is constructed to higher standards, compared to the county road network.

2.16 Layover areas will be established off the public highway:

- Near to Mile End roundabout at Oswestry or at the Pool Quay highway depot nor to Welshpool
- At the Abermule highway depot nor of Newtown

The journey from Ellesmere Port to Mid Wales will be split as follows:

SSA B (North)

- From Ellesmere Port to Mile end or Pool Quay layover area
- From Mile End/Pool Quay layover area to the wind farm sites SSA B (South) and SSA C
- From Ellesmere Port to the Abermule layover area
- From the Abermule layover area to the wind farm sites

- 2.17 A network of designated passing places will enable convoys to move from passing place to passing place, waiting at each to allow following and opposing traffic to clear, if required. However, the general aim of the Police, who will escort the AILs, will be to keep the convoy moving, without stopping, as far as traffic conditions and road safety permit. The passing places will be used when required to minimise delays to the general public.
- 2.18 Each passing place will be large enough to hold a single convoy. Key passing places will be designated as suitable for longer term storage in the event of an emergency
- 2.19 The passing places have been spaced along the route such that queuing traffic should be delayed by no more than 10 minutes, where practicable. The time taken for an AIL convoy to move between passing places has been calculated assuming an average speed of 30 mph on A-class roads and 20 mph on minor roads with the exception of specific constraints where vehicle movement may be slower. The convoy could travel at up to 40 mph along unconstrained sections. Parts of the trunk road route are already subject to 40 mph and 30 mph speed limits such that general traffic travels at similar speeds along sections of the route.
- 2.20 An Environmental Assessment of the sTMP has been undertaken (Appendix 2.4 (Volume II) of RES December 2013 SEI). This document has been prepared by AMEC on behalf of RUK. The document sets out the potential environmental effects arising from the highway works proposals contained within the sTMP. The report concludes that no EIA significant effects were identified as a result of the works set out in the sTMP for the proposed transport of wind turbine components into mid Wales SSAs from Ellesmere Port.
- 2.21 A Stage 1 Road Safety Audit (RSA) for Sections 2-5 of the sTMP has been prepared by gm Traffic Consultants on behalf of RUK (Appendix 2.5 (Volume II) of RES December 2013 SEI). The RSA

produced three issues that could occur as a result of the movement of ALLs along the proposed route and offered recommendations on how to deal with these. These issues related to overhanging branches, misuse of passing place lay-bys and forward visibility to back of traffic queues. A Stage 1 RSA assists the detailed design process and is followed by Stage, 2, 3 and 4 RSAs during the design and implementation stages. The recommendations are practical and reasonable and will be part of the designer's further work.

3 The Delivery Process for Abnormal Indivisible Loads (AILs)

- 3.1 An Agreed Statement on the Delivery Process for AILs (January 2014) has been prepared by Stuart Michael Associates on behalf of RenewableUK Cymru, RWE NPower Renewables, RES, Vattenfall and Celtpower in consultation with the highways Agency AIL Division, Welsh Government (Transport), Welsh Police, West Mercia Police and PCC (Document CD-COM-TRA-002).
- 3.2 This Agreed Statement has been prepared in order to provide a clear understanding of how the deliveries of AILs to the proposed developments will be effectively managed and coordinated such that they are compliant with current planning policies, Road Vehicle Regulations and reflect best practice. Planning conditions can be imposed on the consented schemes to ensure that the appropriate controls are in place.
- 3.3 The Statement demonstrates that the management and delivery of AILs can be undertaken in an effective and coordinated manner. All aspects of the delivery process have been consulted upon. There is a common agreement amongst the consultees that the principles and measures outlined in the Statement will achieve the objective of ensuring effective management and coordination of multiple AIL deliveries during the construction period. WG and PCC are keen that this delivery process becomes a 'model' for all future wind farm schemes in mid Wales.
- 3.4 The Statement can apply equally to the sTMP and TMPs produced for alternative routes.
- 3.5 Key components of the Statement are:
- The appointment of a Transport Coordinator to be responsible for managing and scheduling the deliveries of AILs to each development.
 - Delivery slots will reflect the state of readiness of the developments and be ranked according to their status.
 - Delivery slots will be able to be transferred from one developer to another to cater for construction programme changes
 - All AILs deliveries associated with Mid Wales wind farms will be escorted by the Police.
 - Welsh Police will set up an AIL Escort Unit specifically to deal with and provide the necessary resources for the escorts to the Mid Wales wind farm developments

4 The Cumulative Impact of non AIL Construction Traffic on the Strategic Road Network

- 4.1 An assessment of the cumulative impact of non-AIL construction traffic associated with proposed Mid Wales wind farm schemes has been undertaken by AECOM (Document CD-COM-TRA-003). This has used a Cumulative Traffic Impact Model and the Institute of Environmental Assessment (IEA) guidelines for the Environmental Assessment of Road Traffic.
- 4.2 The assessment has been prepared on behalf of RES, RWE and Vattenfall. Technical input has also been provided by Celtpower and Ffern Wynt Llaithddu Cyf (FWL).
- 4.3 In accordance with the topic guidance for Session 4 of the Inquiry, the cumulative impact of both Section 36 and non-Section 36 schemes has been assessed. The schemes are as follows:

Section 36

- Carnedd Wen
- Llanbrynmair
- Llanbadarn Fynydd
- Llaithddu
- Llandinam

Non-Section 36

- Bryngydfa
- Carno Phase 3
- Cemmaes 3
- Esgair Cwmowen
- Garreg Lwyd
- Mynydd Waun Fawr
- Neuadd Goch
- Tirgwynt
- Hirddywel

- 4.4 Construction programme details and associated traffic flow detail was obtained for most schemes. The construction traffic associated with the enabling highway works of the STMP from Ellesmere Port and the southern route from Newport has also been allowed for.
- 4.5 The Model is to proposed to be presented, via a PowerPoint presentation, in the Strategic Transport Hearing Session. The PowerPoint is included as Appendix A.
- 4.6 The model is inter-active, allowing the impact of any number of wind farms, including individual developments, to be assessed in terms of strategic road network traffic impact. Indeed, variations in construction programmes can also be assessed. These aspects of the model are demonstrated within the PowerPoint presentation.
- 4.7 The Guidelines for the Environmental Assessment of Road Traffic (IEA) suggest screening criteria (percentage changes in traffic) may be used for establishing the need for an assessment of potential significance The IEA advises that a 30% change in traffic flows represents a reasonable threshold for including a highway link in an assessment of potential significance.
- 4.8 Receptors are locations or land uses categorised by their degree of sensitivity (or Environmental Value) with guidance provided in the Design Manual for Roads and Bridges. To the south of Oswestry the A483 trunk road passes, in part, through communities such as Pant and Llanymynech where there is frontage residential development. Similarly at Welshpool and along the A458 trunk road there are individual residences and communities adjacent to the road (e.g. Llanfair Caereinion, Llanerfyl, Llangadfan, Foel). These routes and locations have been categorised as having a sensitivity level of “Medium” in accordance with guidance.
- 4.9 Other county roads within Welshpool or passing through villages such as Arddleen, Guilsfield, Llansantffraid and Meifod were considered to have sensitivity levels corresponding to “Medium”. The same categorisation has been applied to locations further south such as Newtown and Dolfor.
- 4.10 The assessment of the significance of the effect of traffic changes along these routes has regard to both the magnitude of the development related traffic (change) and the receptor’s environmental value (sensitivity level).

4.11 Two scenarios were tested:

- Scenario 1 includes the Section 36 sites and Tirgwynt. This scenario represents the industry-accepted transport assessment of assessing the applications under consideration together with consented development only (Tirgwynt).
- Scenario 2 includes the Section 36 sites and all of the Non Section 36 sites. Scenario 2 represents the scenario requested for Session 4 of the Inquiry.

4.12 The cumulative impact assessment of non-AIL construction traffic on the strategic road network concludes that:

Overall Cumulative Impact of Construction Traffic

- In terms of overall construction traffic it is evident that the daily cumulative impact of the wind farm proposals on the strategic and primary road network does not exceed the 30% increase in overall traffic identified by IEA Guidelines as the screening threshold for assessment of potential significance.
- Whilst many of the road network links are classed as medium sensitivity receptors, the assessment of significance leads to values of no impact or neutral or slight overall in all cases.
- This conclusion applies to both of the Scenarios evaluated such that even considering the non-Section 36 applications, as well as the Section 36 applications at Inquiry and consented development, the overall cumulative impact is satisfactory.

Cumulative HGV Impact of Construction Traffic

- In terms of HGV construction traffic levels contained within overall construction traffic levels, it is evident that the daily cumulative impact of the wind farm proposals on the majority of the strategic and primary road network does not exceed the 30% increase in overall HGV traffic identified by IEA Guidelines as the screening threshold for assessment of potential significance.

- This conclusion applies to both of the Scenarios evaluated such that even considering the non-Section 36 applications, as well as the Section 36 applications at Inquiry and consented development, the cumulative impact is satisfactory.
- The A483 south of Newtown and Dolfor in the vicinity of the SSA C application sites of Llandinam, Llaithddu and Llanbadarn Fynydd is the one exception, requiring further consideration for 2016.

- 4.13 In relation to the final bullet point of paragraph 4.12, the cumulative assessment has considered 5 schemes commencing in 2016 (2 Section 36, 3 non-Section 36) on this section of the A483 trunk road. In reality, there is likely to be a degree of works programme spread.
- 4.14 Further, the impact is only apparent on the central section of Link 25 where the northern and southern traffic flows (from Links 24 and 25) meet. For the majority of the link's length the impact and significance are those of the adjacent links which do not exceed the screening threshold of the IEA Guidelines for Scenario 1, but do so for Scenario 2 but with only slight significance which is considered satisfactory.
- 4.15 It is worth noting that the A483 south of Newtown has traffic flows considerably less than those normally associated with a trunk road and the number of HGVs is also a relatively small number. It is for this reason that the HGV percentage increase registers as being potentially significant under the IEA Guidelines whereas the actual numbers of construction HGVs spread throughout the day is relatively modest.
- 4.16 Given the factors considered above, which relate to one construction year and a limited length of the strategic road network, the impact on Link 25 is also considered satisfactory overall.
- 4.17 The inter-active nature of the model can be demonstrated by assessment of a number of likely changes to previously assumed construction programmes for Llaithddu, Llanbadarn Fynydd and Llanbrynmair to more accurately reflect programmes in relation to grid connection dates. The construction programme input is changed (by horizontal movement of the construction programme

in the spreadsheet), traffic impact matrices are re-generated and monthly percentage impacts are subsequently produced.

- 4.18 The resultant traffic impacts are demonstrated in the attached PowerPoint and in Appendix B which compares the outputs contained with the submitted Document CD-COM-TRA-003 (last page of this Document) with the revised Llaithddu programme.
- 4.19 In terms of the overall cumulative impact of construction traffic, the assessment conclusion is the same as previously with the impact not exceeding the 30% increase in overall traffic identified by IEA Guidelines as the screening threshold for assessment of potential significance.
- 4.20 In terms of HGV construction traffic levels contained within overall construction traffic levels, the impact is spread across 2016 to 2019 as anticipated with the traffic impact in 2016 reduced in scale along the length of the A483.
- 4.21 HGV impact significance is still classified as moderate or large on the length of the A483 adjacent to the SSA C schemes in 2016 although the scale of traffic impact is reduced by the works programme 'spread'. Whilst the 'spread' results in an increase in traffic impact in 2018 and 2019 from negligible to slight, impact significance is classified as slight.

Appendix A – Powerpoint presentation

Appendix B – Comparison of Construction Traffic Impacts