

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

Closing Session

Alliance Closing Submissions

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Section 1: Introduction and Approach

Introduction and Structure

- (i) In this single document prepared for the Closing Session, the Alliance collects together various Sections which a number of different readers will present by way of a mixture of reading and summarising the written material.
- (ii) The general structure is to set out first a number of Sections raising matters which are recurrent themes so that they need to be read or summarised only once. Subsequent Sections address each application in turn and incorporate by reference relevant parts of those earlier Sections so as to avoid repetition.
- (iii) There is a contents page to aid navigation and, for those inclined to use the function, sections are linked from it by hyperlink in the electronic Word version.
- (iv) Each Section follows a similar format and is headed with a list of the primary Alliance documents relevant to that section, although a full list is attached at the end.

The approach to all the windfarm applications

Alliance Inquiry Documents ¹
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ALL-007, 008, 009, 010, 011 and 012; ALL-SSAC-POE-04, ALL-SSAB-POE-02, ALL-CLO-POE-01, ALL-CLO-POE-01-RESPONSE
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- 1.1. The Alliance has maintained, from the start, that there is a balance to be drawn through this CPI process so that the Secretary of State can ultimately make decisions drawing that balance taking account of
- i) relevant legislation and policies;
- together with
- ii) positive and negative effects of the windfarms and their associated infrastructure and other 'off site' effects such as traffic and highway considerations.²

¹ As supplied to the Inspector, main parties, and the Inquiry library

² See ALL-007 §9 and ALL-008 §1.8

- 1.2. When construing policies for their meaning and when applying policies to any particular circumstances, it is almost always necessary to have regard to the objectives which underpin and which gave rise to those policies. That can also shed important light on the weight to be attached to policies either in their own right, or in the overall balancing equation at the time of decision-making.
- 1.3. The Alliance also recognises and accepts that the National Policy Statements and their objectives will be at least highly persuasive if not the key parameters which will be followed by the Secretary of State when making a decision for proposals >50MW and associated grid infrastructure. EN-1 makes it clear that there is a balance to be drawn³, but for so long as there is (i) an urgency (ii) for the level of need it describes, there is a presumption in favour of approvals (even to the extent of overriding local policy documents etc) but to be weighed with other material factors⁴. Nevertheless, like any presumption it can be outweighed by other factors and if and to the extent that the urgency or the level of outstanding need (or both) is diminished after the passage of time and in light of progress towards the UK's renewable energy target, the strength of any presumption in the overall balance will also diminish.
- 1.4. In that connection, EN-1 also makes it plain that:

“... The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.”⁵

There are, therefore, no UK planning policy limits or targets for different sectors. That is also a clear indication that UK Government would not expect to give weight to any sectoral targets set by any other body in planning policy (or guidance).

- 1.5. As TAN 8 itself makes plain,

“Energy policy is a reserved function that is not devolved to the Assembly Government.”⁶

and as the UK Government reminds us,

“The Welsh Government does not have devolved renewable energy targets ... ”⁷

yet TAN 8 (a Technical Advice Note) was specifically designed to be (i) a delivery mechanism for delivering (ii) the then WAG's (iii) enumerated

³ EN-1 §§4.1.2 - 4.1.5 [CD/COM/001]

⁴ EN-1 §§4.1.2 - 4.1.5 [CD/COM/001]

⁵ EN-1 §3.1.2

⁶ TAN8 §1.3

⁷ UK Renewable Energy Roadmap Update 2012, p14 [CD/Com/015]

onshore wind Energy Policy Target⁸ - and PPW was adjusted by MIPPS 01/2005 to fit TAN 8⁹.

- 1.6. When turning to the subject of (biomass and) wind projects¹⁰, EN-3 specifically addresses Welsh policy and advice (maintaining but not disaggregating that distinction). At para 2.2.1 it states:

“... Whether an application conforms to the guidance or the targets [or not¹¹] will not, in itself, be a reason for approving or rejecting the application.”¹²
- 1.7. The clear message - as a matter of UK Government policy endorsed by Parliament - is that any Welsh Energy Policy Targets would be nothing to the point in the final analysis for any >50MW onshore wind generation proposal: be they expressed as (or understood as) limits (caps) or as targets to be met. The test to be applied in all cases, according to EN-1, is the balance to which the Alliance refers above – having regard to the extent to which any relevant UK target is or is not likely to be met.
- 1.8. The then WAG was well aware of the emerging UK NPSs when ‘the June and July letters’ were written¹³. Mr Griffiths specifically referred to it¹⁴. And it is plain from the development of Welsh policy analysed by the Alliance that the then WAG eventually came to recognise that it was no part of WAG’s functions to set Energy Policy Targets to be met¹⁵: That is a matter for the UK Government. And that, no doubt, is why the last sentence of EN-3 para 2.2.1 was included, even though by the time that Parliament endorsed the draft NPS, the TAN 8 Energy Policy Targets to be met set out in TAN 8 expressly in order to meet an undeveloped Welsh Energy Policy had recently been removed from TAN 8 and PPW¹⁶.
- 1.9. Thus, whilst Mr Rugman¹⁷ (himself also unaware of amendments to TAN 8 in 2011) cautioned against raising any friction between UK and Wales over TAN 8 Energy Policy Targets and their legacy, the point has already been raised, addressed and resolved by the UK Government (and Parliament) in EN-3 §2.2.1 (July 2011).

⁸ see eg TAN 8 (2005) §§1.4, 1.5 and 2.4 [ALL-011B Tab 6]

⁹ see eg ALL-009 p17 §3.5

¹⁰ EN-3 §1.8.1 [CD/COM/002]

¹¹ The Alliance makes this insertion to clarify how it reads the text. The alternative ‘or’ to be juxtaposed with ‘whether’ would serve only to bring the emphasis to distinguishing guidance ‘or’ targets which is an improbable construction.

¹² EN-3 §2.2.1

¹³ ALL-011B Tabs 8 and 9

¹⁴ ALL-011 Tab 9

¹⁵ See ALL-009 and analysis in ALL-012 section 4

¹⁶ See ALL-011B tab 10 and §10 of the ‘Dear Colleague letter at ALL-011B, tab 7

¹⁷ OBJ/649/002

- 1.10. The need for the point to be addressed more fully at the CPI arises in large measure from the near-universal failure of parties to the CPI to recognise the changes made to TAN 8 and related changes to PPW in their submitted material. As far as the Alliance discovered, every other party who addressed TAN 8 came to this CPI asserting and relying upon the TAN 8 Targets either as targets or as caps (or even as targets with caps)¹⁸ and without any acknowledgement at all of the amendments made to TAN 8 (and PPW) in February 2011¹⁹. Even PCC came to the Opening Session itself expressly relying on para 2.5 and Table 1 of TAN 8 which (amongst other paras²⁰) had already been removed more than two years earlier²¹. It was, of course, para 2.5 and Table 1 which carried the “established” enumerated WAG Energy Policy Target into TAN 8 (and MIPPS and then PPW) and which set out the figures for each SSA in order to deliver that target.
- 1.11. No-one who has read and understood the Alliance material submitted at the beginning of this CPI can be in any doubt: **there are no Welsh Energy Policy Targets to be met**. Unlike successive revisions to PPW, WG has not published a ‘consolidated’ version of TAN 8 (2011) and did not alert the CPI to the changes (even referring to TAN 8 by reference (only) to its original publication date of 2005 in its letter of January 2013²²). The Alliance tried to assist understanding by providing extracts at the start of the CPI which show the effect of the principal amendments (see ALL-011B, Tab 10) – but that still needs to be read together with the rest of the text at Annex A to the ‘Dear Colleague’ letter of 28th February 2011 to see the full extent of the changes²³.

TAN 8 and the Sea Change

- 1.12. The Alliance has traced the history and gestation of TAN 8 and this analysis demonstrates the magnitude of the Sea Change which removal of the Energy Policy Target heralded. It is fundamental. The removal of the Target is every bit as fundamental a sea-change as was the creation of TAN 8 in 2005 in order to give effect to and deliver the Target in the first place. Not only has the Target gone, but every element of policy and guidance and any expression of objective or of causal effect which drew from or was a result of the determination to deliver that Welsh Energy Policy Target should now carry no weight. It all needs to be unravelled, and cannot be unravelled without a clear understanding of TAN 8’s gestation and subsequent adoption²⁴. Only then can the changes made in order to provide a delivery mechanism for the Target

¹⁸ See ALL-012 section 5

¹⁹ See ALL-012 section 5, and at §5.17 *et seq* for the promoters’ positions

²⁰ See ALL-011B Tabs 7 and 10

²¹ See references cited at ALL-012 §5.7

²² CON-001-002

²³ ALL-011B, Tab 7 §10 and Annex A

²⁴ See for this generally, ALL-009

be understood, and then discounted now that there is no Target to be delivered and no delivery mechanism required.

- 1.13. Given the language of EN-3 para 2.2.1, why does the sea change matter? At the first level it matters because the Secretary of State as decision-maker must first (i) know what the policy or guidance he is addressing actually is before then (ii) understanding what it says before he can then (iii) address its relevance before then (iv) deciding whether or not to attach any and if so what weight to it.
- 1.14. At the next level it matters because it will affect the utility of any assistance given to the Secretary of State through the adopted position of other parties, or any judgments or conclusions on the merits which are offered by them. If that assistance has been derived against a backdrop of a misunderstanding of the policy or guidance, or against the backdrop of attributing weight to factors from that policy or guidance, the Secretary of State needs to assess how useful those positions or judgements actually are in light of his conclusions on the matters highlighted above.
- 1.15. The sea change which occurred in PPW and TAN 8 in February 2011 was plainly the result of the then WAG realising (or perhaps having been told by persuasive authority in Cardiff, Whitehall or Westminster) that it, WAG, had no business making Energy Policy, still less Energy Policy Targets to be met: that was and is, a matter for UK government and at a UK level. And, in any event, UK Government policy is that it is not appropriate for planning policy to set targets for or limits on different sectors²⁵: this target brought forward by TAN 8 was, of course, specifically an onshore wind target²⁶.
- 1.16. This realisation is crisply recognised by the WG's response to the Report of the Environment & Sustainability Committee (Energy Policy and Planning in Wales) delivered in October 2012. The Alliance set that out in opening, referred to it again in the last Session, and it is not here repeated, but incorporated by reference²⁷.
- 1.17. The crux of the Alliance submissions on this was set out in Opening but can be restated for convenience²⁸:

TAN 8 (2005), a Technical Advice Note designed to serve existing planning policy, was so fundamentally different from the policy it was supposed to serve that the very policy had to be adjusted (by MIPPS) to make that policy fit the Technical Advice Note. It was designed (it was said) to give effect to a

²⁵ EN-1 §3.1.2

²⁶ See the now-deleted TAN 8 §1.4

²⁷ ALL-012 §5.41

²⁸ ALL-012 §2.1

pre-existing Welsh Energy Policy - which was immune from question and beyond debate. It did so by setting

- i) enumerated
- ii) onshore wind sector
- iii) energy policy
- iv) targets
- v) to be met.

And, in order (and only in order) to fulfil each of those elements,

- vi) SSAs were devised and created.

1.18. This last point was emphasised time and again by the applicants as they came to the CPI carrying the message that the SSAs were conceived and devised in order to accommodate the delivery of enumerated Welsh Energy Policy Targets to be met²⁹. The Alliance agrees. That is very much part of the Alliance case on the weight to be attached to the fact (if it be the fact) that any one or more proposal lies within any SSA boundary (where even WG has apparent difficulty over the factual position 'on the ground'³⁰) and the weight to be attached to any policy or guidance which is referable to the Energy Policy Target having been adopted. The essence of the Alliance case on SSAs is distilled at ALL-010 §§(i) - (iv) and made good in the text which follows, and brought together in Opening. The short conclusion is that

- no weight should be given to
- any element of PPW or of TAN 8
- which is (directly or indirectly) referable back to
- the emergence of TAN 8 as a delivery mechanism for delivering
- enumerated onshore wind Energy Policy Targets
- in SSAs designed to accommodate it.

1.19. The SSAs are just that: devised and devised only in concept and in size, in order to accommodate those sectoral Energy Targets for them – as part of the overall Target to be met. As to location, their selection was dependent upon proximity to existing (or mostly assumed committed) grid or future grid reinforcements connected to the Local Area Network³¹. That fundamental premise has since fallen away³².

1.20. Some seek to support the SSAs after the event as carrying some form of constraint on large scale wind turbine development in other areas. There may come a time when, in the context of UK Energy Policy, any suggestion that

²⁹ See eg refs at ALL-012 §§5.23 (CPL), 5.30 (FWL), 5.32 (RWE), 5.39 (RES)

³⁰ See ALL-009 p21 §11.4

³¹ ALL-009 p6 §§5.2 and 5.3

³² ALL-009 p6 §§5.2 and 5.3 and Section 8 addressing grid matters below.

that would introduce a presumption against wind generators outside SSAs may need to be considered in light of the general presumption in EN-1 (see eg Mr Frampton's point in the Opening Session discussion). So, too, might questions arise over any sequential test being introduced in that way.

- 1.21. There can be no doubt as to the SSAs' function. Their function was to be part of the delivery mechanism for a sectoral Energy Target derived outside of WAG competence. The material which led up to TAN 8's adoption, and which the Alliance analyses, underlines the point. At every turn, the purpose and objective of accommodating the Target is emphasised. Arup's brief was to ensure that the Target could be met³³, it had been revised specifically so that the Target could be achieved³⁴. The number and size of the SSAs was ultimately driven by the previously adopted Target figure: the brief was explicit

*"... in order to provide a map ... that identifies [SSAs] capable of delivering [the Target] ...the search areas will need to accommodate (as a minimum) 800 MW ..."*³⁵.

- 1.22. Their location was driven by proximity to existing or already committed grid infrastructure, but in the end that reinforcement was not to be³⁶ (see further the Section addressing Grid matters, below). TAN 8 and the MIPPS which it beget both emphasise the need for the SSAs as a delivery mechanism for delivering the Target³⁷.

- 1.23. Because they were promoted to serve a Target which was to be met, other factors which would hinder that goal were side-lined in the selection process (see above), or marginalised after the event. One example of that, fastened onto by the Promoters is in TAN 8 Appendix D (a new appendix, which formed no part of the consultation³⁸). It is a familiar passage:

*"Within (and immediately adjacent to) the SSAs, the implicit objective is to accept landscape change i.e. a significant change in landscape character from wind turbine development."*³⁹

There are other passages in the same category highlighted in the Alliance material such as the recognition of a degree of cumulative impact being a product of the identification of SSAs of a size sufficient to meet the Target⁴⁰

³³ ALL-010 p6 §2.2

³⁴ ALL-010 p9 middle of quotation, p10 §2.7

³⁵ ALL-010 p11 §2.9

³⁶ ALL-009 §§5.1 - 5.3

³⁷ TAN 8 §2.5 and MIPPS references set out in ALL-010 p17

³⁸ ALL-009 p11 §6.7

³⁹ TAN 8 Appendix D §8.4

⁴⁰ See eg ALL-009 p8 §5.10 and ALL-010 pp13-14 §§2.13 - 2.15

- 1.24. Passages such as these are directly related to the determination to accommodate the enumerated Welsh Energy Policy Target figure. “Something had to give” if that immutable Target was to be delivered (as expressly recognised in the material leading up to their adoption⁴¹). Apart from there being neither consultation over any such ‘objective’ (as pointed out in the Alliance material⁴²) that passage falls full square within the category of guidance or policy which is referable back to the delivery mechanism of the undeveloped Energy Policy Target and should carry no weight. Something had to give if the Welsh onshore wind Energy Target was to be delivered, but now that there is none, it does not.
- 1.25. We can illustrate the distinction. If, as a matter of overall balance, the Secretary of State recognises that any one or more of the current proposals would bring about a significant change in landscape character but still, nevertheless in that balance decides to approve it, then that is a matter for the Secretary of State to weigh. But the Secretary of State should not begin the assessment process by giving weight to the premise that significant landscape change within (or immediately adjacent to) the areas should be taken as a given, still less as an objective to which the Secretary of State attaches any weight. The fundamental and only reason for that objective has gone: its shadow should not have any bearing on the Secretary of State’s approach to the balance to be drawn.
- 1.26. But that last approach appears to have guided PCC and others (such as NRW), as well of course, as the developers who rely heavily on that claimed ‘given’. But it has lead PCC to an approach which appears to be that it (PCC) and the Secretary of State are obliged to accept and deliver a quota in or close to SSAs so that a Welsh Energy Policy target can be met. That is now a false premise.

The June and July 2011 Letters

- 1.27. The Alliance responded to the Inspector’s request for an analysis of these in Opening⁴³. The CPI returned to them again in the last Session. Some call the numbers in the Griffiths letter ‘targets’ and others call them ‘caps’. WG calls them ‘maximum capacities’⁴⁴. The Alliance analysis shows that they are the same numbers which were grasped to support the 2GW ‘aspiration’ which had earlier been brought into PPW instead of an earlier suggestion for a 2.5GW

⁴¹ See the analysis in ALL-009 and ALL-10

⁴² ALL-009 p11 §6.7

⁴³ ALL-012 section 6

⁴⁴ CON-001-002

aspiration - derived in an entirely different manner⁴⁵ - and which remains in PPW/6⁴⁶.

- 1.28. The Alliance sees the figures as simply a recitation of what Garrad Hassan produced on the basis of their engineering assessment of theoretical maximum yield if there were (largely) no constraints on what could be installed other than the limited few adopted by Arup in drawing up the draft SSA boundaries which they then gave to GH to work from⁴⁷. GH had simply reviewed Arup's work on the basis of a range of permutations as to presumed broad constraints for a series of different permutations. Arup's work itself had already left factors such as landscape considerations out of account when drawing up the draft SSA boundaries⁴⁸ on which GH then subsequently worked.
- 1.29. The 'Griffiths Letter' of 6th / 7th July 2011 (and the WG letters to the CPI⁴⁹) refer back to and rely on the Garrad Hassan work – with apparent approval and endorsement. The 2005 GH report (not the appendices) was published for the first time in July 2011 in order 'to support' that letter⁵⁰. Factually, the claims made as to GH's role and involvement are in some respects rather wide of the mark⁵¹ (as was the First Minister's reference to transport matters having been taken into account⁵²). Mr Frampton may well be right when he questioned whether or not the Ministers (or the authors) may have been fully briefed⁵³. But in relation to the significance which can be attached to the aspiration of 2GW (or its weight as an aspirational policy within PPW), the GH figures need to be seen in their context. And, given the specific reliance on that work from 2004 and 2005, it needs to be explored in order to gauge the weight which can be placed on any material which draws from it.
- 1.30. First, the GH exercise was based on the then draft SSA boundaries which were themselves larger than those which were later adopted in the published TAN 8⁵⁴.
- 1.31. Second, the draft TAN 8 boundaries to which GH were working were drawn up by Arup and drawn up by Arup leaving the following out of account:
 - (a) Landscape capacity and sensitivity;
 - (b) Historic landscapes;
 - (c) National Trails;

⁴⁵ See ALL-012 §6.19

⁴⁶ PPW/6 p169 §12.8.13.

⁴⁷ See eg ALL-009 sections 5 and 7, and ALL-012 section 6

⁴⁸ ALL-009 section 5 and ALL-012 section 6

⁴⁹ ALL-011B Tab 9 and CON-001-002

⁵⁰ ALL-012 p26 §6.20

⁵¹ See ALL-009 section 11

⁵² Written Statement 17 June 2011 2nd page, 3rd para ALL-011B Tab 8

⁵³ Frampton Opening Session discussion

⁵⁴ ALL-009 §7.2(e)

- (d) Landscape quality and character using Landmap, and
- (e) Social issues⁵⁵;
- (f) Peat (except from an engineering stability perspective)⁵⁶ and
- (g) Any assumed failure to deliver the then anticipated grid reinforcement⁵⁷.

1.32. Third, those GH figures for 1,700MW⁵⁸ from the 'Base Case + Noise' parameter, were the result of an exercise whose purpose was to "*elucidate theoretical upper limits to development.*"⁵⁹. They could only be achieved (on GH's analysis) if each of the following inexhaustive list of factors was also left out of account:

- (i) visibility,
- (ii) intervisibiity,
- (iii) ornithology,
- (iv) ecology,
- (v) hydrology,
- (vi) detailed noise assessment⁶⁰ (this was listed in error simply as 'noise' in ALL-012⁶¹) and
- (vii) any and all other matters which would be considered within EIA processes.

So, in order to achieve the GH figures, the decision-makers would also have to ignore (if not already ignored)

- (viii) any and all transport or highways issues and effects⁶² and
- (ix) be indifferent to the nature and impact of whatever grid connections were needed irrespective of any environmental effects arising.

And we could add to the list that

- (x) they would also need to ignore any and all socio-economic effects (if not already ignored), and
- (xi) they would also need to be indifferent to any forestry constraints (and their implications) - which had specifically led to different and lower 'technical potentials' expressed in other parts of GH's work⁶³.

⁵⁵ ALL-009 §4.1

⁵⁶ ALL-009 §6.13

⁵⁷ See ALL-009 §5.2 and TAN8 Appendix C §2.13

⁵⁸ GH Report p13, Table 3.1

⁵⁹ GH Report p6 §2.2.1

⁶⁰ ALL-009 p9 §5.10(g), p14 §7.3, p19 §10.11

⁶¹ ALL-012 p28 §6.23(vi)

⁶² ALL-009 §5.5.

⁶³ ALL-009 section 7 and ALL-012 §6.23.

- 1.33. The Alliance confidently expects that no decision-maker would approach matters in that way, and equally confidently concludes that WG must have recognised (i) that its aspiration is nowhere expressed to override each and every one of these potential constraints to delivery and (ii) that the 2GW 'aspiration' was bound to be disappointed to some very significant but unassessed extent. The extent of that disappointment would inevitably depend on the operation of the 'softer' environmental and other constraints flagged by Garrad Hassan (and any other relevant factors which had not specifically been flagged by Garrad Hassan - it did not purport to be an exhaustive list). As the CPI has seen, the 'Griffiths Letter' shows that WG is far from indifferent to grid issues.
- 1.34. The GH figures only ever were an expression of the 'theoretical' 'technical potential' enumerated by GH specifically on that basis⁶⁴. They were not subjected to and never have been subjected by WG to any appraisal of what could realistically be expected to be provided after due planning process. There has been no SEA⁶⁵. Nor (as some have described them⁶⁶) were they derived in order to give any expression of the 'environmental' limit for what became the (now smaller) SSAs. These 'raw' GH figures cannot conceivably be described as anything like assessed environmental limits: quite the opposite. For the most part they were unconstrained by environmental factors – as GH stressed. (We can also note, parenthetically, that even TAN 8 para 2.5 noted that the then 1,120MW Target was lower than the 1,700MW GH figure to allow for 'local discretion'. It would follow that the 'Griffiths figures' would take that 'local discretion' away if seen as a target or even as an environmental limit up to which W/F installed capacities could expressly go. The unpublished and unconsulted-upon GH appendices illustrate the sort of effect that that might have⁶⁷.)
- 1.35. The Griffiths figures are, it now appears, what made up the bulk of the 'aspirational' 2GW in PPW and, as such, it can fairly be said to be truly breathtakingly aspirational if it is based on any interpretation of GH's work which suggests that that work demonstrated that 1,700MW was deliverable from the SSAs. (Remember, the 2005 GH material was not published, and then in part only, until the Griffiths letter was published⁶⁸.) The Alliance sees the Griffiths letter as directed essentially to grid and to tipping points. Mr Frampton seems to agree on that score⁶⁹. It carries the hallmarks of a hurried response to the reaction to the First Minister's letter⁷⁰. And, given its terms,

⁶⁴ See ALL-012 section 6.

⁶⁵ ALL-009 p19 §10.8, p21 §12.1.

⁶⁶ Mr Minto for NRW, at the Opening Session, for example.

⁶⁷ ALL-011C Tabs 2b and 2c

⁶⁸ ALL-012 p26 §6.20

⁶⁹ Frampton Opening Session discussion

⁷⁰ ALL-009 p19 §§10.9 - 10.10

Mr Frampton has already wondered about the extent of the briefing which had been given to its author. The Alliance sees the force behind that, too.

- 1.36. In summary, the “Griffiths figures”:
- (a) cannot be targets – they are too fragile and insecure for that; and they
 - (b) cannot be environmental limits – no substantive environmental constraints were engaged in their derivation.
 - (c) They are merely an engineering output from a brief which asked for the ‘theoretical’ ‘technical potential’ from larger SSAs than came to be adopted. In a policy context of ‘aspiration’, the Alliance can fairly describe them as ‘ornamental’⁷¹ but a potentially seductive trap for the unwary or under-informed decision-maker addressing specific development proposals.

The Need and the Balance

- 1.37. EN-1 refers to the 15% UK renewables target. The EU target for the UK (transposed as a UK target for the Secretary of State to achieve) for 2020 is “at least 15%”. Whilst the obligation is there expressed to be ‘at least’ 15%, EN-1 para 3.4.1 shows that the UK Government has decided that 15% and not some higher figure should be the actual UK Target for 2020 - as a matter of UK policy. It meets the obligation. EN-1 and all subsequent Roadmaps continue repeatedly to express the UK 2020 target as 15% - not least because that is what it is – and the Treasury’s Levy Control Framework, limiting subsidy spending towards meeting the UK target, has been set accordingly⁷².
- 1.38. In energy policy terms, EN-1 sets out what is required in order to “*hit this target*”⁷³. That addresses the quantum. On the timescale, policy calls for new renewables projects which meet that 2020 target to come forward as soon as possible because the need for them to come forward in order to hit that target is “*urgent*”⁷⁴. The urgency relates, clearly, to the timescale but also to the target figure within that timescale.
- 1.39. EN-1 specifically invites consideration of any given proposal’s “*contribution*” to meeting the need for energy infrastructure⁷⁵ as part of the appraisal of overall balance. Dr Constable, (director of REF⁷⁶) addresses that for each proposal in his material submitted for Sessions 1 and 2⁷⁷. He addresses the absolute and the proportionate contribution of each generator (individually and

⁷¹ ALL-012 §6.36

⁷² Constable, ALL-CLO-POE-01-RESPONSE p2 §7.

⁷³ EN-1 §3.4.5

⁷⁴ EN-1 §3.4.5.

⁷⁵ EN-1 §4.1.3.

⁷⁶ Constable ALL-SSAC-POE-03 p22 §62

⁷⁷ Constable ALL-SSAC-POE 03, ALL-SSAB-POE-02

collectively) towards electricity's share of the UK renewables target and those figures will be recorded below for each proposal (we describe them as the 'EN-1 contributions'). That work repays careful study and the Secretary of State can note that the Promoters, never slow to rebut or respond to Alliance material, did not so do for that analysis. He expressly recognises that, whilst it is inevitable that any single project will only contribute a small proportion of the whole⁷⁸, the small contributions will mount up. But he quantifies that contribution so that the Secretary of State can measure the benefits (or the "contribution") when weighing what the Alliance sees as very considerable harm from each (and collectively): harm not only from the turbines, but from Grid and other 'offsite' effects such as AIL traffic and works to accommodate AILs.

- 1.40. The quantified EN-1 contributions from each proposal (and collectively) are modest in the scheme of things. As a foretaste, and assuming the promoters' optimism over the figures, all five together would represent about 0.38% of UK's annual electricity consumption, about 1% of the UK target for renewable electricity generation, and save about 0.071% of UK CO₂ emissions (before peat loss etc is factored back into the equation, or any assessment of net CO₂ contributions from installing grid works is taken into account)⁷⁹.
- 1.41. As it happens, the UK is recently confirmed as being on track for meeting its adopted EU renewables Target of 15% by 2020 and ahead of schedule. EN-1 expressed an urgency in making provision for that 2020 Target⁸⁰. That urgency doubtless adds weight to the general presumption for so long as the Target is unfulfilled. The recent material shows that the UK is on target to beat the electricity share and thus the 2020 Target by some margin⁸¹. The measure of any urgency and any need from even these small contributions to the 2020 Target is very substantially diminished, or even now removed. It would be irrational to give further contributions from electricity generation to that 2020 Target any significant weight⁸².
- 1.42. Whilst these small contributions towards longer-term goals after 2020 must still be recognised, the urgency against 2020 has gone. The Government repeatedly stresses its determination to draw from other and different technologies in the overall renewables and energy mix in the years to come⁸³. When appraising progress, the Government has been addressing its ambitions eg for onshore wind towards meeting the 2020 overall Target. It notes that

⁷⁸ See eg Constable, ALL-SSAB-POE-2 and ALL-SSAC-POE-03 §§ 3 and 4, although updated now as to the position of the UK in relation to UK targets by ALL-CLO-POE-01-Response.

⁷⁹ See eg Constable, ALL-SSAB-POE-02 p6-7 §§ v(iii) - xv) and ALL-CLO-POE-02

⁸⁰ EN-1 §3.4.5.

⁸¹ Constable, ALL-CLO-POE-01 p3 §9.

⁸² Constable, ALL-CLO-POE-01-Response p2 §8.

⁸³ See eg UK Renewable Energy Roadmap Update 2013 p16 §21 [CD/RWE/PLA/02]

ambition as being 11-13GW from onshore wind by 2020⁸⁴ and that there are 8.8 GW now installed or under construction, with 5.41GW consented (total =14.21GW), with a further 6.5GW in the planning system⁸⁵. So, onshore wind is already playing more than its anticipated part towards the 2020 Target. And, for every addition above the 2020 Target, the closer we are brought to breaching the Levy Control Cap on subsidy⁸⁶.

- 1.43. The Alliance draws from Dr Constable's material and invites the conclusion that, expressed by reference to the UK 2020 Target for renewables, the UK is already well on track for meeting it (with a potential excess of 5%) and a considerable further oversupply of capacity is being brought forward through the planning system⁸⁷.
- 1.44. In the overall balance,
- (i) there are no Welsh energy policy targets to be met;
 - (ii) the weight to be given to the contribution towards meeting the 2020 UK Target must be very little, if any, and
 - (iii) the weight to be given to the UK's longer term renewable energy and decarbonisation goals falls to be balanced with
 - (iv) the environmental and other factors affecting mid Wales and the people who live, work and raise families here - as well as those who visit (and potentially the same for Shropshire as well); and
 - (v) the decision-maker needs always to be sure to unravel any policy, guidance or expressed objectives which are directly or indirectly related to any aspect of the delivery mechanisms for the delivery of the 800MW of onshore wind nameplate capacity target set out in TAN 8 and PPWs before their amendment to remove the target in 2011.
- 1.45. A summary of the main points relating to other factors in the balance and about which the CPI has heard so much is summarised in the sections which follow.

⁸⁴ DECC Electricity Market Reform: Allocation of Contracts for Difference-A Government Response on Competitive Allocation, 13 May 2014 p18 §16 [document submitted with ALL-CLO-POE-01-Response]

⁸⁵ Constable ALL-CLO-POE-01-Response p2 §§9 - 11

⁸⁶ Constable ALL-CLO-POE-01 p3 §10

⁸⁷ Constable ALL-CLO-POE-01 p3 §§9 and 10 and p4 §12

Section 2: Community

Introduction

Alliance Inquiry Documents ⁸⁸

ALL-SSAC-POE-01, ALL-SSAC-POE-07, ALL-SSAB-POE-01R, ALL-SSAB-POE-04, ALL-OHL-POE-07, ALL-S4-POE-03, ALL-S4-POE-08

- 2.1 The Alliance has produced evidence about our community, the attitudes, interests and activities of local people as well as considering the real world evidence as to the purported benefit of windfarm developments to the community.
- 2.2 This is to our knowledge the first piece of work that has actually asked local people what they do and what interests them as well as what would affect their quality of life. It is notable that they were pleased to be asked and welcomed the opportunity to give their views.

Community profiles

- 2.3 The Alliance used Office of National Statistics data 2001 and 2011 Censuses⁸⁹. Ten Community Councils are within SSAC, these along with Powys and Welsh national statistics were selected for comparison.
- 2.4 The data does not generally support the contention that communities with wind farms are in any way economically better off than either neighbouring or wider national communities. Indeed, many of the key indicators show that some are significantly worse off than broadly comparable neighbouring areas that have no windfarms.
- 2.5 It is particularly notable that Carno and Llandinam have experienced above average declines in young people, concomitant increases in elderly residents and in Carno's case a very large rise in unemployment.
- 2.6 None of the Alliance's evidence in this section has been contested by any of the developers. No alternative evidence contradicts these findings.

Community surveys

- 2.7 The Alliance appreciates that Planning Inquiries are not decided by plebiscite; however, survey data is used by the wind industry to claim public support, and

⁸⁸ As supplied to the Inspector, main parties, and the Inquiry library

⁸⁹ Census Key Statistics & Quick Statistics Tables

these claims are used in their applications. The purpose of this evidence is to demonstrate the extent of feelings amongst local residents, and their wish for those feelings to be represented at this Inquiry.

- 2.8 Surveys were carried out by Community and Town Councils; some Community Councils, with internal tensions resulting from Councillors' interests in applications, refused to conduct the surveys. In this case local residents have carried out their own survey.
- 2.9 6,441 responses were received⁹⁰ from the 14 community council districts. Of these 5,667 residents object to the windfarm proposals and 5,834 object to National Grid's transmission proposal. This is unsurprising as *development on this scale has never been seen before in Wales, or in most of England*⁹¹.

Community consultation

- 2.10 During one week in July the Alliance ran consultation stalls for a total of ten hours in Newtown and Welshpool to find out what people valued in Mid Wales. The questions and responses are set out in full⁹²; however the salient points are: 77% of those consulted live in Mid Wales or Shropshire; a significant majority put highest value on wildlife, dark skies and open spaces.
- 2.11 The countryside is well used by local people who frequently enjoy walking, particularly in open countryside and wildlife watching. This is of course the same land proposed for windfarm developments.
- 2.12 The consultation results demonstrate clearly that visitors and residents (regardless of how long they have been associated with Mid Wales) value the wildlife and the opportunity to get out into open spaces and appreciate dark skies and tranquillity; this is a rare commodity as can be seen in the satellite image provided⁹³ where mid Wales is shown to be one of the last remaining areas of dark skies. It is evident that the further construction of windfarms and associated works will change Mid Wales and all of the aspects that are valued by the people will be lost or severely diminished.
- 2.13 Throughout this Inquiry local people have attended sessions throughout the weeks, listening attentively and asking pertinent questions along with providing extra information. Hundreds of personal witness statements objecting to the applications have been submitted, with more than 150 local people coming to the Inquiry sessions to read their statements personally.

⁹⁰ ALL-SSAB-POE-04 appendix and OBJ/416/002a

⁹¹ ALL-S4-POE-08 #45 §13

⁹² ALL-S4-POE-03

⁹³ ALL-S4-POE-03 Community Consultation p15 §11.3 Fig 9

2.14 As you will have seen, courtesy and consideration for others along with tremendous effort has been our way of showing the Inquiry what is important and how much we care about the integrity of our lovely landscapes and the wellbeing and livelihoods of those who live here.

Section 3: Landscape

General

Alliance Inquiry Documents ⁹⁴

ALL-SSAC-POE-01, ALL-SSAC-POE-04, ALL-SSAB-POE-01R, ALL-SSAB-POE-03, ALL-OHL-POE-02, ALL-OHL-POE-07, ALL-S4-POE-02, ALL-S4-POE-08

- 3.1. The Alliance can bring out a distillation of our Landscape and Visual Evidence as a context for all the applications.
- 3.2. Within mid Wales this landscape is referred to as Mwynder Maldwyn: *‘the gentleness of Montgomeryshire’*. It engenders what is locally termed *‘hiraeth’* (sense of belonging). Amongst the residents of this area, there is a considerable weight of feeling that their landscape and all that they derive from it is threatened by the applications before this Inquiry ⁹⁵.
- 3.3. Furthermore the local residents are convinced that the applications before this Inquiry, even though they are of a scale never before envisaged, are the thin end of a wedge that would see first the desensitisation and then the devastation of the landscape that gives them a sense of place. The Alliance has heard nothing from these proceedings to assuage our fears.
- 3.4. Protections for landscape exist in many forms. In the Alliance's professional landscape evidence, we have presented our case with reference to Policy ENV2 of the Powys UDP ⁹⁶ and Articles 1 & 2 of the European Landscape Convention 2000 ⁹⁷. In evidence from us the ‘receptors’, we have described as best we can in our own way what the landscape means to us and how these proposals will affect our enjoyment of this wonderful area.
- 3.5. The landscape of Mid Wales is characterised by blocks of raised plateaux intersected by river valleys. Whilst the landforms may not be as dramatic as more mountainous areas, they present a more subtle picture of a variety of valleys opening out into major river systems. The grain of the landscape is horizontal. Vertical structures create discontinuities in the flow of the landscape; vertical structures topped with rotating and distracting blades even more so. The landscape has been affected by existing developments over the

⁹⁴ As supplied to the Inspector, main parties, and the Inquiry library

⁹⁵ ALL-SSAB-POE-04 §§ 2.1-2.2

⁹⁶ Powys Unitary Development Plan 2001-2016 Written Statement (Powys County Council, Adopted March 2010) section 4.4.4

⁹⁷ ALL-SSAC-POE-04 §§ 8-12

centuries; the current proposals represent a brutal step change in the slow evolution of the landscape.

- 3.6. The landscape is appreciated by local residents, whether they be members of families who have lived here for generations, moved here for work or chosen to retire here. Local people value this landscape. We have demonstrated this in our survey work⁹⁸ and in the many letters and appearances at the Inquiry
- 3.7. The landscape has supported human activity for millennia. This is evidenced by the wealth of archaeological sites within the application areas, many of which have a direct relationship with the landscape which can still be appreciated today.
- 3.8. The landscape's form and lack of mineral resources may have left it relatively unspoilt from the effects of the industrial revolution; benign neglect has preserved it. Such areas are becoming increasingly rare in this island, and as urbanisation increases, the value of peaceful, tranquil, havens increases. The amenity value of such natural environments increases.
- 3.9. The landscape's form results in a variety of natural habitats, from the open moor peat lands of the plateaux through the variety of upper valleys into the broad sweep of the major river valleys. Whilst the construction and presence of turbines and their infrastructure affect the upland ecosystems, the grid connections down to the major conduits of the lower valleys contribute a major change to the ecosystem where tree felling is required.
- 3.10. The natural features created by the streams and rivers have historically dictated the course of the area's roads. The transport of parts and materials, with their necessary highway works, removing further trees and hedgerows will affect habitats. These features will also have an association with grid connections.

Conclusions from professional analyses relied on by the Alliance

- 3.11. First, the evidence shows the importance of using what is called an ecosystems approach. It draws together and analyses multiple aspects of the landscape and assists in understanding and protecting it.

The Ecosystems Approach

- 3.12. The Welsh Government's Ecosystems Approach, promoted through NRW, has three principles⁹⁹:

⁹⁸ ALL-S4-POE-03 Community Consultation Section 6 pp 7-8

⁹⁹ ALL-SSAC-POE-04 § 20

- i) Understanding and revealing the different (sometimes conflicting) values people hold about ecosystem services within decision making.
- ii) A concern to cultivate multiple and synergistic patterns of ecosystem service delivery - exploring ways in which the natural environment can be harnessed and adapted for diverse, rather than singular, ends. Effectively this approach encourages the management of landscapes to provide increased multifunctional benefits.
- iii) Ensuring decisions recognise the need to live within environmental capacity limits and protect nature's functions in order to maintain a sustainable and resilient natural environment.

3.13. The value of the landscape derives not only through the personal sense of place of the residents but also in the appeal to visitors who generate income for the local economy.

3.14. Then there are the professional conclusions drawn. We reproduce them here so that they can be incorporated by reference later for each site and not repeated.

SSA C

3.15. Mr Watkins evidence for the 'SSA C' sites follows a close analysis, and he draws conclusions:

Overall, I consider that the scale of the proposed wind farms and their associated infrastructure (including anticipated grid connection lines), individually and cumulatively, would have significant landscape and visual impacts. This would be detrimental to both the quality of the Maldwyn Landscape and also to the amenity of users of the Glyndwr's Way National Trail. The impacts of the proposals would in my view considerably harm the sense of 'Mwynder Maldwyn', the gentle, intimate and distinctive character of the Maldwyn Landscape that is so highly valued by local people for its special qualities and the important cultural services that these provide¹⁰⁰

SSA B

3.16. Mr Watkins conclusions for the 'SSA B' sites were:

Overall, I consider that the large scale and design of the proposed wind farms and their associated infrastructure (including site access infrastructure, off-site highways works and anticipated grid connection lines), individually and cumulatively, would have significant adverse landscape and visual effects. These effects would result in substantial changes to landscape character and views within the Snowdonia National Park that would, in my opinion, be detrimental to Special Quality 5 (and indirectly to other special qualities of the

¹⁰⁰ ALL-SSAC-POE-04 §65

Park), and adversely affect the character and amenity of Section 3 Areas of Natural Beauty and also panoramas visible from significant viewpoints in the National Park. Such effects would also be detrimental to the visual and sensory qualities of the Cambrian Mountains landscape, and have a negative impact on the visual amenity of users of the Glyndwr's Way National Trail. The impacts of the proposals would, in my view, considerably harm the distinctive characteristics and qualities of the landscape that are so highly valued by local people for the important cultural services that these provide.¹⁰¹

In landscape and visual terms, I do not consider the proposed wind farms before the Inquiry to be acceptable in principle in the proposed locations. In my view therefore neither of the proposals either fully satisfies or conforms with the requirements for safeguarding the landscape in Policy ENV2 of the Powys UDP. Furthermore, the Carnedd Wen proposal individually, and in combination with the Llanbrynmair proposal, conflict with the stated aims, Strategic Policy A and Policy 2 of the Eryri LDP, and also Policy ENV2 of the Powys UDP, to protect the special qualities of the National Park.¹⁰²

The proposals also undermine national planning policy with regards to wind energy development and National Parks set out in the overarching NPS for Energy EN1, and fail to meet the implicit objective in PPW to maintain the quality and integrity of the landscape within the National Park.¹⁰³

SSA C and SSA B cumulatively

3.17. Again, Mr Watkins conclusions for the Cumulative Effects Session were:

In my opinion, the landscapes within the area affected by the proposals before the Inquiry contain some of the most distinctive areas of countryside in Wales outside of National Parks and Areas of Outstanding Natural Beauty. National Trails, and other areas of statutorily designated Open Access Land, offer extensive opportunities for local communities and visitors to experience, enjoy and benefit from the natural and cultural assets of the landscapes and their associated distinctive qualities. It was for this reason that the Glyndwr's Way National Trail was designated, which is a major recreational asset that provides an important means for people to access, appreciate and enjoy the distinctive visual and sensory qualities of this landscape.¹⁰⁴

It is apparent that an extensive tract of landscape in Mid Wales, and extending into Shropshire, would be affected by the cumulative impact of the proposed wind farms before the Inquiry and their associated grid connections, which I consider to be significant and adverse. The cumulative impact on the

¹⁰¹ ALL-SSAB-POE-03 §134

¹⁰² ALL-SSAB-POE-03 §135

¹⁰³ ALL-SSAB-POE-03 §136

¹⁰⁴ ALL-S4-POE-02 §36

*character and special qualities of the landscape in Mid Wales would be significantly extended when considered in combination with the large number of proposed, consented and operational commercial scale wind farms. I also consider that there would be a substantial adverse cumulative impact on the visual amenity and experience of users of National and Regional Trails, which I assess as significant. Overall, I consider that the cumulative effects of the wind farm proposals and grid connections would have a significant adverse impact on cultural services that the landscapes in this part of Mid Wales provide in terms of recreation, tourism, spiritual enrichment, inspiration, reflection and employment. The importance of these benefits for local people and visitors are demonstrated by the socio-economic evidence submitted by the Alliance.*¹⁰⁵

*In landscape and visual terms, I do not consider any combination of the proposed wind farms before the Inquiry and their associated grid connection options to be acceptable in principle. In my view therefore none of the proposals either fully satisfies or conforms with the requirements for safeguarding the landscape in Policy ENV2 of the Powys UDP.”*¹⁰⁶

Sequential Cumulative Impact on Receptors (people)

- 3.18. The threads of the overall message given to the CPI by the local people can be summarised in the paragraphs which follow.

Glyndŵr's Way

- 3.19. The integrity of the National Trail, Glyndŵr's Way, is of vital importance; this path has landscape value at its very heart, which conforms directly to the principles and purposes behind the establishment of long distance paths.

These proposals interfere with the enjoyment of Glyndŵr's Way in a number of different ways:

- i) in an intimate sense where the path passes directly through the wind farm sites,
- ii) in an intermediate sense where the traveller emerges from a section of forest or wood to a viewpoint to be confronted by a revealed domination of turbines,
- iii) and in a peripheral sense where the applications frame the forward horizon for considerable distances, in whichever direction the receptor is travelling.

¹⁰⁵ ALL-S4-POE-02 §37

¹⁰⁶ ALL-S4-POE-02 §38

These interactions, as we have stated in our proofs, have significant adverse cumulative, and individual, impacts on the extensive vistas and horizons that characterise these upland landscapes from Glyndŵr's Way¹⁰⁷.

Ramblers, cyclists, horse riders, motorists and passengers

- 3.20. Sequential cumulative impact would be experienced not only by those travelling along Glyndŵr's Way.
- 3.21. The potential for appreciation of the landscape from the section of ancient path over the Kerry ridge will be compromised.
- 3.22. If for example, the walker/cyclist/horse rider/other follows the part of the drover's road from the designated Blockwood car park, heading west towards the Glog, there will be views of the Llandinam to Welshpool 132 kV grid connection to the north in the upper Mule valley, followed by skyline views of Llandinam redeveloped and Llaithddu to the west and an arc of the Carno Turbines, Carnedd Wen, Llanbrynmair, Tirgwynt and Mynydd Clogau (when we include operating and approved developments). If we included Neuadd-Goch and other proposals the dominant feature would be a "windfarm" or a "TAN 8" landscape¹⁰⁸.
- 3.23. This industrial landscape (alien to Mwynder Maldwyn and *'hiraeth'*) will also feature in the itinerary of those receptors (people) on Glyndŵr's Way as they head towards Knighton; it will not be a shock, the receptor will have seen the effects of SSA C on many occasions for many miles on their progress east from Machynlleth. As we have heard from a representative of the Cross Wales Walk, the climactic rise to the Llandinam Plateau is already spoilt by the Llandinam P&L development; the new prospect from the proposals would be a desecration¹⁰⁹.
- 3.24. Those horse riders on the Prince Llewellyn Ride have made their concerns to the Inquiry, as we have heard in evidence¹¹⁰.
- 3.25. The northern arc of Glyndŵr's Way through SSA B will not escape the impact of the applications in this Inquiry, should they be approved. The area which is associated with the Snowdonia National Park to the North and the Cambrian Mountains to the west has these spectacular features as a backdrop to views from Glyndŵr's Way.

¹⁰⁷ ALL-SSAB-POE-03 §102

¹⁰⁸ OBJ-415 Valleys Against Destruction

¹⁰⁹ OBJ-649-003 Powys Ramblers Full Written Statement

¹¹⁰ OBJ/086,087/OSOC, OBJ-313 Powys – British Horse Society

- 3.26. Up to 9 Km of the National Trail will be within the Application boundaries for Carnedd Wen and Llanbryn-mair. Views towards Snowdonia and the Cambrian Mountains will have the developments in the foreground from the high places the trail visits in this section.
- 3.27. The developments will be a re-occurring feature on the skyline looking west from the first high ground as the trail climbs from Welshpool until it descends into Llanbryn-mair, a distance of 43 miles.

National Cycle Trails

- 3.28. National Route 81 will be affected by the proposed Llandinam to Welshpool 132kV overhead line on its path from Welshpool to Caersws, and further affected by Llandinam redeveloped and Llaith-ddu on the scenic route from Newtown to Caersws. The 132kv line from SSA C to SSA B will also affect it near Llanidloes.
- 3.29. A promoted series of cycle routes from Montgomery will be considerably affected by the Llandinam line and the routes have been submitted as evidence ¹¹¹.

Road users

- 3.30. The Mid Wales Landscape is experienced on the road journeys westwards to and from the Welsh Coast. Two principal roads are the A458 and the A470, both passing through SSA B.
- 3.31. The A458 from Llanerfyl to Foel and beyond to and from the Two Rivers Caravan Park will have a southern aspect sky-lined by Llanbryn-mair and Carnedd Wen. The northern aspect of the road is threatened with the potential to be sky-lined by the Dyfnant application.
- 3.32. The A470 already has a southern aspect sky-lined by Carno and Trannon shortly to be opposed by Tirgywnt on its northern flank, with the threat of Mynydd Llest y Graig to come. The western-bound traveller (by car or train) will then see Carnedd Wen and Llanbryn-mair to the south.
- 3.33. The A470 south from Newtown to Llanidloes will receive a greater visual impact than it does at the moment from a redeveloped Llandinam.
- 3.34. The A483 from Newtown to Llandrindod Wells will have sequential views of Llandinam redeveloped, Llaith-ddu, with the potential of Neuadd Goch; followed by Llanbadarn Fynydd, with the potential of Garreg Lwyd Hill, Bryngydfa and Hirddywel turbines.

¹¹¹ The leaflet 'Montgomery Cycle Rides' submitted as an addition to OBJ-415-LAND-POE-OHL Valleys Against Destruction Proof

Summary

- 3.35. The Alliance evidence has shown that the Landscape is not just about cold, clinical analysis of features and ‘descriptors’. It is what gives us our sense of place and our sense of well-being from all the senses. It is not just what we, ‘the receptors’ see: it is what we experience and it shapes our experience. It includes what we see, what we smell, what we hear, what we don’t hear, what we spot for the first time or have come to love for its permanence in our lives. We enjoy and appreciate the landscape for its association with wildlife and the generally unspoilt context in which we can engage with nature. We are happy to invite others to share it, and many derive their livelihood from the visitors. It is their landscape too. Any one or more of these proposals will, as our evidence has shown, very seriously harm that overall landscape.

Section 4: Tourism and Economy

Introduction

Alliance Inquiry Documents ¹¹²
ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-04, ALL-S4-POE-08, ALL-SOCIOECO-REBUTTAL-S4-04, ALL-S4-POE-04-ADDENDUM

- 4.1. To avoid repetition the Alliance provided evidence on tourism and the economy in the cumulative session. Each windfarm has its own specific impact on businesses, rides, walks, heritage features and so forth and each additional windfarm escalates the perception of encroaching industrialisation intruding on highly valued landscapes.

The Alliance wishes to draw the attention of the Inspector and the Secretary of State to the following five key points:

A. Powys has a full employment, stable economy unlikely to benefit from a superimposed short term construction project

- 4.2. The Alliance has provided the most recent Powys economic data¹¹³ which refutes implications of a structurally unsound and unsustainable economy. It is not high wage, but at a rate of 1.7% has one of the lowest unemployment rates and one of the highest percentage of people with NVQ level 4 or above. Official figures show Powys with by far the highest number of active enterprises in Wales, at 735 per 10,000 population¹¹⁴. The Powys strategy for economic development is to assist the highly varied and often sector-leading enterprises to maximise profit margins.
- 4.3. The Welsh Index of Multiple Deprivation¹¹⁵ shows there is no significant socio-economic deprivation in North Powys on any indicator except access to public transport. This is a very different economy to other authorities with whom the developers seek to draw parallels such as Rhondda Cynon Taff where there are 42% of the population without qualifications and the highest number of super output areas in Wales in the most deprived 10%¹¹⁶.

¹¹² As supplied to the Inspector, main parties, and the Inquiry library

¹¹³ Data sets from Census 2011 and NOMIS December 2013 provided as core document presentation from Powys Head of Regeneration and Planning February 2014

¹¹⁴ Department of Business, Industry and Skills 2012

<https://statswales.wales.gov.uk/Catalogue/Business-Economy-and-Labour-Market/Businesses/Business-Demography/ActiveBusinessEnterprisesPerPopulation-by-Area-Year>

¹¹⁵ ALL-S4-POE-04

¹¹⁶ Rhondda Cynon Taff LDP to 2021 background information

- 4.4. Self-employment is 8.4% higher than the Welsh average in part due to the desirability of the area when work is not location specific. Such workers contribute greatly to the local economy and help to keep communities vibrant. There is a real risk that a lengthy construction period and windfarm proliferation would destabilise the economy, deter self-employed workers and inhibit inward investment. As PPW5 acknowledges: *'the quality of the environment is often a factor in business location decisions'*¹¹⁷
- 4.5. A Cardiff University study into the impacts of existing windfarms on the rural Welsh economy¹¹⁸ is instructive. It concludes that there are very few genuine opportunities for the sourcing of goods and services locally and assesses that less than 150 direct jobs will be created across the whole of Wales. With a competitive and well established international onshore turbine construction market any significant additional Welsh manufacture is unlikely. They also found that community benefits show no evidence of being an economic driver as also demonstrated by communities near existing windfarms¹¹⁹.
- 4.6. The astronomical claims of possible employment creation by renewable industry sponsored studies are predicated on a substantial onshore turbine manufacture and export industry. The claims are not borne out by the Cardiff University study or experience in Mid Wales. The 39 turbine Cefn Croes windfarm generated some 100 jobs during the 9 month construction period, very few were local and there are just 4 permanent jobs¹²⁰. The claims are not even substantiated by long experience in Germany which, despite a manufacturing base, has found actual job creation well below expectations.¹²¹
- 4.7. No long term benefit will accrue to local people by the provision of improved services or local infrastructure from any of these proposals.

B. Tourism is a successful and important part of the economy

- 4.8. Tourism provides 13.3% of Welsh GDP, 12% of Powys employment¹²² and brings £615 million pa into the economy of which 58% is from Montgomeryshire.
- 4.9. The Welsh Economic Research Unit considers tourism as *'inordinately important'* to Mid Wales making a high contribution to the local economy,

¹¹⁷ ALL-S4-POE-04 § 8.7

¹¹⁸ ALL-S4-POE-04 § 6.16 citing Munday et al Cardiff University and Business School, Journal of Rural Studies 2011

¹¹⁹ ALL-SSAC-POE-07 Community Profiles

¹²⁰ ALL-S4-POE-04 Section 5

¹²¹ ALL-SOCIO-REBUTTAL-S4-04 Additional reference doc. D Economic Impacts from the Promotion of Renewable Energies. The German Experience. Final Report Rheinisch Westphalisches Institute fur Wirtschaftsforschung

¹²² ALL-S4-POE-04 § 1.18 Deloitte and Oxford Economics (2010) and Welsh Tourism Definitive Value Report 2012

supporting infrastructure and community facilities and having the potential for high value growth¹²³.

- 4.10. Developers have sought to downplay the importance of tourism by limiting their consideration to the immediate environs of the windfarm. This is patently absurd as such massive and incongruously moving structures will impact over a very large area and it is the entirety and integrity of the far reaching, tranquil views that provide our main tourist and day visitor attraction.
- 4.11. It is reasonable to consider businesses within a 15km radius of SSAs C & B. As the Alliance has catalogued¹²⁴, this area has one of the highest concentrations of holiday park homes away from coastal areas with nearly 5,000 homes, many of luxury standard. These popular homes are obviously situated in sheltered, well landscaped locations closer to facilities and not on the moorlands that the visitors nevertheless enjoy. Visit Wales¹²⁵ has calculated that each holiday park home generates some £9,000 per annum for the local economy.
- 4.12. The Alliance has also submitted details of all the accommodation providers and self-catering units within the same area and a calculation based on the Welsh Tourist Board bed space formula of the value of this accommodation¹²⁶.
- 4.13. Even a small decrease in visitors would thus have a marked effect on the local community. As the Regeneris tourism report states, *'businesses (in North Powys) may be sensitive even to small changes in visitor numbers as a result of windfarm development and there may be a particular challenge for them replacing those visitors who are deterred'*¹²⁷.
- 4.14. This Inquiry has heard from visitors and from Holiday Park businesses¹²⁸ where home owners are already departing from sites and there has been a complete absence of sales due entirely to the threat of windfarms and infrastructure as letters provided show. Developers seek to dismiss this as a 'fear factor' but it is nonetheless indicative of the deterrent effect on visitors. Declining business confidence over several years of threatened development followed by many years of construction could well destroy the slim profit margins of these businesses as well as inhibiting investment¹²⁹.

¹²³ ALL-S4-POE-04 § 1.18 Tourism Economic Activity in the Sub-Regions of Wales (2010)

¹²⁴ ALL-S4- POE-04 Annex B

¹²⁵ ALL-S4-POE-04 § 1.20 British Holiday and Home Parks Association with Visit Wales. Economic Impact Assessment 2011

¹²⁶ ALL-S4-POE-04 Annex B & C

¹²⁷ ALL-SOCIOECO-POE-S4-04-ADDENDUM para 3.6 quoting Regeneris Report para 8.6

¹²⁸ ALL-S4-POE-04 samples at Annexes F, G & I

¹²⁹ ALL-S4-POE-04 Annex and statement made to this Inquiry by A and P Pryce

- 4.15. Recent, peer reviewed research¹³⁰ demonstrates a fall in property value for houses even at over 2 kms from windfarms. This reduction is evident from the submission of planning applications, as we have seen in Montgomeryshire, but continues post build. Clearly, windfarms do not become more acceptable as claimed and reactions are not merely due to fear. Whilst property values are themselves not normally a planning matter, they do
- (i) give an indication of the magnitude of impact on amenity and harm to the living or wider environment, and
 - (ii) where reduced values affect the ability of owners to move around for socio-economic reasons or to raise finance for business and enterprise, it clearly is a planning matter.

C. Montgomeryshire exhibits a set of tourism factors that make it particularly susceptible to windfarm development

- 4.16. The Alliance undertook to accurately portray the visitor attraction and demographic and to quantify tourism dependent businesses to provide a sound basis for assessing sensitivity to the proposed developments¹³¹.
- 4.17. Oral and written statements to this Inquiry identify the special and even unique qualities of Montgomeryshire that attract and retain visitors¹³² and how the proposals will affect them.
- 4.18. Walking, cycling and riding are popular pursuits for day and staying visitors. As we show throughout Alliance Proofs the key asset of Glyndwr's Way will be severely affected by most of the individual proposals. Cumulatively, the impact on one of only two Welsh National Trails will be devastating. National Trails have been carefully selected as taking walkers through the very best and most characteristic landscapes and are a considerable marketing tool. In Powys the network of footpaths has been used to create circular walks with Glyndwr's Way thus opening up opportunities for day walkers.
- 4.19. There is little doubt regarding walkers' opinions of windfarms. The recent Scottish Mountaineering Council survey showed 2/3rds of 1,000 respondents stating they would avoid or had not revisited places with windfarms¹³³. We also note Ramblers Cymru's unequivocal policy document¹³⁴ which considers

¹³⁰ ALL-S4-POE-O4 Gibbons (London School of Economics) 2013 cited at § 4.4 and submitted as Alliance reference document ALL-S4-POE-O4/10 (v.5 draft) and now available as published doc (April 2014)

¹³¹ ALL-S4-POE-O4 Section 3 and Annexes

¹³² See for example Alliance Compendium ALL-SSAB-POE-01/26: Forest Free Ride business operator using the Llanbrynmair Moors with clients from around the world who use local accommodation providers, camp sites and restaurants. Carnedd Wen and Llanbrynmair windfarms would completely remove the tranquillity and unspoilt nature of the Moors that attract many repeat visitors. Also ALL-S4-POE-O4 Annex I

¹³³ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.13 Additional Reference document C

¹³⁴ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.11 (full relevant text from Ramblers' Cymru Policy on Renewable Energy (2012) § 2

on-shore windfarms as causing ‘*degradation to the Welsh landscape and walking environment*’. Also the objections of Visit Scotland to windfarms that would impact on the Southern Uplands Way¹³⁵.

- 4.20. Walking day trips alone bring £190 million pa to the Welsh economy and both reduce seasonality and increase sustainability¹³⁶. The effective loss of such assets as Glyndwr’s Way, many PRow and open access land must weigh heavily against these proposals.
- 4.21. Should the landscape be desensitised and a Hub and 400kV distribution system be built as a direct or indirect result of consenting the Inquiry proposals, other applications in the pipeline are more likely to be built to fill the available capacity. The result will devastate Montgomeryshire's outstanding landscape and there will be viewpoints with almost 360 degree views of turbines as can be seen from cumulative wireframes¹³⁷. The effects will extend to Shropshire.
- 4.22. Horse riders and businesses¹³⁸ make extensive use of the upland network of bridleways, parts of Glyndwr's Way and nationally promoted Rides¹³⁹. Riders can be uniquely sensitive to turbines as evidenced by the British Horse Society Wind Turbine Experiences Survey which the Alliance brought to the attention of the Inquiry¹⁴⁰. Given liability and their duty of care, riding businesses would be forced to abandon many spectacular rides.

D. There is evidence to predict there will be adverse economic consequences of a development of this scale in an area with the attributes of North Powys

- 4.23. The Alliance's extensive review of tourism studies is summarised in our Proof¹⁴¹. Many studies are old, lack objectivity and fail to demonstrate academic rigour. Within these limitations there is some assistance in predicting trends and general concepts and clearly:
- a. there is a small but significant reduction in tourism numbers and value;
 - b. impact is area specific depending on the unique tourism characteristics making extrapolation unreliable;

¹³⁵ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.12 e.g. objections to Glenluce, Drone Hill, Minny Gap and Glenchamber windfarms on the basis of concerns at the cumulative detrimental impact on walkers on the Southern Uplands Way (a long distance path but without National Trail status)

¹³⁶ ALL-S4-POE-04 §3.18

¹³⁷ Rhiw Porthnant in Vattenfall SEI (2013) View point 1 LVIA 4

¹³⁸ Such as Free Rein and My Horse Adventure Holidays

¹³⁹ Prince Llewellyn’s Ride, The Great Dragon Ride and the Cross Wales Ride all pass through the windfarm areas in several cases within very close proximity to turbines at distances well below the BHS Guidelines of 4 x blade height for National Rides and 2 x blade height for bridleways (e.g. at Llaithddu)

¹⁴⁰ ALL-SOCIOECO-REBUTTAL-S4-04 Additional Reference doc C

¹⁴¹ ALL-S4-POE-04 Section 2

- c. multiple windfarms in a landscape are very much less acceptable (in the region of 40% less) ;
- d. the number of tourists stating they believe turbines spoil a landscape and would be deterred from revisiting is increasing;
- e. visitors who take part in outdoor activities, older people and those who frequently return to an area are more likely to be deterred by windfarm development;
- f. surveys carried out for the Welsh Tourist Board amongst rural visitors show a consistently greater antipathy towards windfarms than some other areas; and
- g. there is a disconnect between people's appreciation of technologies and their acceptance of infrastructure such as pylons, phone masts and wind turbines.

4.24. Developer Proofs of Evidence and questioning of expert witnesses demonstrated a very limited knowledge of the actual tourist offer or the economy with a reliance on extrapolation from unrelated areas and outdated studies that provide no robust evidence that harm would not be caused. Specific studies carried out demonstrate serious omissions and hence flawed analysis, for example at Llanbrynmair¹⁴²

4.25. The Alliance provided a detailed study of the area prior to the release of the delayed Regeneris report¹⁴³. Despite some significant omissions as detailed in our analysis of their North Powys Case study¹⁴⁴, our findings for the area largely agree in substance if not on potential magnitude of impact:

- a. visitors are predominantly higher spending older people or young professionals who enjoy outdoor activities and visit regularly throughout the year. All characteristics deemed as increasing sensitivity to windfarm developments
- b. the attractions are the far reaching; unspoilt views, tranquillity, cultural heritage, sense of wildness and isolation and opportunities for walking, riding and cycling in more remote areas. All aspects again that turbines and grid infrastructure would adversely impact.

4.26. From their study Regeneris assess that:
'The scale of the development combined with the visitor profile and wildness offer of this study area leave it more sensitive to windfarm development than

¹⁴² ALL-S4-POE-04 § 2.2.3

¹⁴³ ALL-SOCIOECO-POE-S4-04-ADDENDUM Note on the report prepared for the Welsh Government by Regeneris Consulting and the Tourism Company (2014 delayed report): Study into the Potential Economic Impacts of Windfarms and Associated Grid Infrastructure in the Welsh Tourism Sector

¹⁴⁴ ALL-SOCIOECO-POE-S4-04-ADDENDUM Section 4

*other parts of Wales ...there may be less potential for replacement of visitors than other areas*¹⁴⁵.

Even if tourists go elsewhere in Wales and the overall share of tourism across Wales as a whole does not decline, this is of no comfort to those who have built up businesses in Montgomeryshire and will have few other rural employment opportunities. And worse still if their home or business has been devalued so that their prospects of relocating or re-financing are reduced.

- 4.27. Further, Regeneris state that this scale of development, which is much greater than in other SSAs¹⁴⁶, and a '*dense clustering of windfarms*' was considered to '*increase the potential for adverse reaction*.'¹⁴⁷
- 4.28. The lengthy construction period, estimated at some 7 years by Capita Symonds¹⁴⁸, was considered by them as the biggest infrastructure project ever seen in Wales. They did not even factor in the concurrent road widening and strengthening operations, transmission infrastructure installation, clear felling and Llandinam decommissioning if all these schemes were to be consented.
- 4.29. The Alliance would agree with the Regeneris assessment that given a limited road capacity in the area, any congestion is likely to deter visitors and would add to the difficulties caused to businesses dependent on time sensitive deliveries and agricultural operations.
- 4.30. Regeneris also consider the closures and diversions of walks and rides and noise during construction, the transmission infrastructure and the potential loss of business investment as all increasing the risk factors for North Powys tourism.

E. The proposals are contrary to local and national tourism policy and full consideration needs to be taken of the socio-economic impacts

- 4.31. Strategic Search Areas are not designated development sites; an important but often overlooked distinction. Landscape capacity, quality, character and sensitivity; historic landscapes; National Trails, access and transport were all excluded from considerations in the original identification of SSAs. All are very significant issues for tourism and the wider economy and must attract full weight in the balance.

¹⁴⁵ Regeneris Tourism Report 7.68 and conclusions ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁶ Regeneris Tourism Report tables 3.2 and 3.4 ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁷ Regeneris Tourism report p.120 cited in ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁸ ALL-S4-POE-04 § 3.33 Capita Symonds access Routes Survey 2008 for Powys CC and the WAG

- 4.32. The Rural Development Committee of the National Assembly speaks of the '*major importance in encouraging tourism activities and conserving and upgrading rural heritage*'¹⁴⁹ and the Welsh Tourism Strategy emphasises the development of walking, riding and cycling. Constructing further windfarms in Montgomeryshire directly conflicts with these strategies.
- 4.33. The Mid Wales and Powys strategy for tourism is to increase the value rather than the volume of tourists to preserve the very special qualities that draw higher spending tourists and generate the outstandingly high level of repeat visitors and all year round tourism.
- 4.34. Decisions at Moorsyde, Pentre Tump and Mynydd Llanllwni are significant here in their recognition of the importance of tourism in the planning balance. In the latter case, the development is in a Strategic Search Area. These are detailed in the separate section below.
- 4.35. In conclusion the Alliance would draw the attention of the Inspector and the SoS to the concept of a tipping point¹⁵⁰ beyond which turbine numbers would impact negatively on tourism. North Powys already has over 250 wind turbines. Any further development will be overwhelmingly prominent and necessitate major Grid infrastructure and provide few benefits to the local economy. The Alliance submits to the Inspector and the Secretary of State that this is the step change that will indeed prove the 'tipping point'.
- 4.36. It may be that one small windfarm may not have an overt effect on tourist numbers. Three, four or more plus transmission infrastructure and the whole protracted construction process in an area sought by those seeking unspoilt countryside, far reaching views and tranquillity will have substantial detrimental effects.
- 4.37. Increasingly research is indicating that in an area with the characteristics of the tourism offer and the visitor profile in North Powys there is a high probability the area will lose part of its tourism share and that prospects for bringing in new visitors or for added value growth will be severely curtailed. Evidence from existing windfarms shows that there is little likelihood of significant jobs from windfarms or of any economic boost from community benefits to balance losses elsewhere in the economy.
- 4.38. Unequivocal evidence will only be available when the windfarms are constructed. That could be too late for Montgomeryshire.

¹⁴⁹ ALL-S4-POE-04 § 8,1 WG Rural Development Committee into Rural Tourism 2011

¹⁵⁰ e.g. ALL-S4-POE-04 § 2.1.2 Aitchison (Garreg Lywd Windfarm Tourist Impact Analysis for RES) § 5.1.2 and ALL-SOCIOECO-POE-S4-04-ADDENDUM §§ 5.2 & 2.8 Regeneris Report

Appeal decisions as they relate to this CPI

1. Moorsyde Appeal Decision¹⁵¹

- 4.39. Inspector Mackenzie considered the importance of tourism to the local community in Northumbria. An area considered to have similar characteristics to Montgomeryshire in the Regeneris Tourism Report¹⁵². :

371 *There is, in my view, a fundamental knowledge gap about how a local, as opposed to an overall, tourist economy might fare after a windfarm development has taken place. The available research, none of which relates to north Northumberland, suggests that individual windfarms would be unlikely to have a serious effect on tourist numbers. However, I am less confident about the effect of an accumulation of 3 or possibly 4, windfarms in an area approximately 10kms by 10kms which is a popular tourist destination for those who seek unspoilt countryside, distant horizons and tranquillity.*

- 4.40. Inspector MacKenzie was considering the cumulative impact of small windfarms but the point is clearly made. A windfarm of 6 or 7 turbines in itself may not seriously impact tourism but three windfarms, totalling 20 turbines, could when the tourism attraction is unspoilt countryside, distant horizons and tranquillity.
- 4.41. She goes on to state that creating a ‘windfarm landscape’ with 20 turbines would have unacceptable landscape and visual effects:

372 *This leads to the view that the same combinations could deter more tourists than they would attract, and that this could have an adverse effect on the local economy. However a lack of empirical evidence about the effect of multiple windfarms makes it difficult to reach a firm conclusion about this. Nevertheless in my view the quadruple and triple combinations described above would fail to **promote** tourism, an objective of RSS policy 16.’ (Inspector MacKenzie’s emphasis)*

2. Pentre Tump Appeal Decision¹⁵³

- 4.42. In an area of Radnorshire of similar landscape characteristics to upland Montgomeryshire and with a tourism offer largely based on walking and riding,

¹⁵¹ Appeal decision: Catamount Energy Ltd, Moorsyde Windfarm & npower Renewables Ltd Northumberland 2009, Inspector Ruth MacKenzie

¹⁵² ALL-SOCIOECO-POE-S4-04-ADDENDUM § 3.18

¹⁵³ Appeal decision: Land at Pentre Tump New Radnor Powys (Jan 2014), Inspector Nixon

Inspector Nixon's determination significantly included great weight given to the amenity of walkers and riders and their tourism potential¹⁵⁴.

- 4.43. He determined that the site is: '*prominently located in a range of views and vistas from different directions with many upland recreational routes leading in the direction of, or having views of the site. These routes and routes for pony trekking tours, including overnight stays.*'
- 4.44. He goes on to state that '*the turbines would be perceived as prominent, dominant or even overwhelming*' from these routes and '*the level of sensitivity which users of these routes will have to the character of their surroundings.*' He concludes '*that the proposed development would have a seriously adverse effect on the character and appearance of the upland landscape and the amenity of its users.*'
- 4.45. In Montgomeryshire greater weight should be given with a promoted National Trail and a National Ride. That Pentre Tump is outside of an SSA is irrelevant as two of the proposals before this CPI are also outside SSAs and in the case of the others the exclusion of Trails (see 4.31 above) means they have to be given weight in the determination.

3. Bryn Llywelyn Appeal Decision (Mynydd Llanllwni)¹⁵⁵

- 4.46. This recent appeal decision is of considerable relevance to this Inquiry as it relates to a windfarm partly in an SSA (SSA G). The decision was released on 6th May 2014 and was then submitted as an Inquiry document by Powys CC. The reasons for rejection are significant in the weight given to cultural heritage, the tourist economy, public amenity and landscape.
- 4.47. Mynydd Llanllwni has a local Special Landscape Area (SLA) designation as indeed did three areas of Powys under Policy EC3 Structure Plan Replacement 1996:
- i) the Western uplands (Llanbrynmair Moors SSA B)
 - ii) the Border Hills, Kerry Hills and Eastern Montgomeryshire (SSA C)
 - iii) all common land
- 4.48. Powys finally determined not to include any SLA designations in the adopted UDP in consideration of the high quality landscape of the whole county as confirmed in an exchange between Powys and Celt Power¹⁵⁶.

¹⁵⁴ §§ 19 & 22

¹⁵⁵ Appeal decision: Mynydd Llanllwni and Mynydd Llanfihangel Rhos-y-Corn Commons (2014), Inspector Emyr Jones

¹⁵⁶ Celt Power ES Vol 1 (2008) Ch.6 Landscape and Visual Assessment 6.2.2 item 2 communication with Mike Lloyd 07.03.08

4.49. The Alliance would also remind the decision maker that virtually all of upland Montgomeryshire was considered worthy of special designation as a National Park or AONB by Hobhouse in his definitive 1947 Report referred to in ALL-S4-POE-04 and detailed in its Annex A. This gives an indication of the true landscape value of the area which is not always apparent in the statements of the developers' landscape witnesses.

4.50. Landscape, cultural heritage and visitor attraction are obviously factors that form an important aspect of the tourism offer. Inspector Jones notes that:
584 *Altering a wild, empty and quiet landscape to an upland windfarm landscape would significantly alter such experiences for those using the site and surrounding area for recreation/amenity purposes or seeking to appreciate the SAMs in their wider setting. This would not be in the public interest.'*

and

584. *Less confident riders would be reluctant to ride within a certain distance of the turbines, although they would not be precluded from doing so. It would also be against the public interest to permit proposals which would effectively discourage some members of the public from enjoying rights of access.'*

4.51. Inspector Jones goes on to state that a high proportion of tourists come because of:
553 *landscape, views, peace, quiet, tranquillity and if that is lost or damaged there is no guarantee they would be replaced in the same numbers by those visiting for the first time irrespective of the presence, or because of the windfarm.'*

4.52. This effectively refutes the claim made for areas with the characteristics of panoramic landscapes and tranquillity (for example by by Aitchison in the RES Tourism Impact Study) that visitors deterred by windfarms will be replaced by others whilst supporting the conclusions of Regeneris Consulting Tourism Study and the Alliance for the North Powys area.

4.53. The similarities to the situation being considered here are clear. The CPI has before it unsolicited comments from visitors stating the unequivocal reasons why they come to Montgomeryshire¹⁵⁷ although the Alliance would note that the cumulative impacts in both SSA C and B would be considerably greater given the size of the applications and the infrastructure requirements.

4.54. Statements were presented at the Bryn Llywelyn Inquiry as at this CPI from visitors expressing their decisions not to return should the windfarms be

¹⁵⁷ see ALL-S4-POE-04 Annex I

constructed and from businesses already suffering financial loss as a result of the proposals (see 2.7 above). Inspector Jones could not have definitive knowledge of positive or negative effects which could only be determined post-construction. However, he considered the balance of probability was such that the risk of impact was too great not to weigh heavily in the balance.

Section 5: Transport

Alliance Inquiry Documents ¹⁵⁸

ALL-SSAC-POE-01, ALL-SSAC-POE-06, ALL-SSAB-POE-01R, ALL-SSAB-POE-07, ALL-OHL-POE-05, ALL-OHL-POE-07, ALL-S4-POE-05, ALL-S4-POE-05a, ALL-S4-POE-08

Transport of turbine components

- 5.1. The Inquiry has heard many representations from the public, community councils and the Alliance regarding the transportation of the turbine components by ALL. Documented evidence has been submitted by Community Councils ¹⁵⁹, and members of the public either directly to the Inquiry or via the Alliance`s Compendium for each session.¹⁶⁰
- 5.2. The Alliance has submitted detailed evidence by a Chartered Engineer (Alliance member) who has long experience of highway matters ¹⁶¹.
- 5.3. Although there have been roughly nine years of studies, reports and discussions devoted to this issue it is obvious that there is considerable work still required to finalise the STMP, draw up much more detailed management plans, undertake more comprehensive trial runs, and design and apply for permission for and construct many infrastructure alterations.
- 5.4. Our position remains that due to the concentration of the developments into an area with such totally unsuitable infrastructure the disruption and consequent economic and social damage that will result is a major risk for mid Wales and its inhabitants.

Construction and ancillary traffic

- 5.5. Similarly, evidence has been presented about construction and ancillary traffic, both on-site and on the general road network ¹⁶².
- 5.6. Our conclusion from this evidence is again that the inevitable disruption to the local economy and residents, on top of all the other impacts, outweighs the benefits promised.

¹⁵⁸ As supplied to the Inspector, main parties, and the Inquiry library

¹⁵⁹ e.g OBJ-001-157-849-TRANS-POE-S4 from Carreghofha, Llandysilio, Llandrinio and Arddleen Community Councils

¹⁶⁰ ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-08

¹⁶¹ ALL-TRANS-POE-S4-05

¹⁶² ALL-SSAC-POE-06, AQLL-SSAB-POE-07, ALL-OHL-POE-05, ALL-S4-POE-05a

Section 6: Ecology and Wildlife

Alliance Inquiry Documents ¹⁶³

ALL-SSAC-POE-01, ALL-SSAC-POE-02, ALL-SSAB-POE-01R, ALL-SSAB-POE-05, ALL-015, ALL-016, ALL-OHL-POE-04, ALL-OHL-POE-07, ALL-019, ALL-020, ALL-S4-POE-06, ALL-S4-POE-08

- 6.1 The Alliance has demonstrated that the approach taken by the developers in the cumulative session has not, as was intended by the Inquiry, provided an understanding at ecosystem level. Instead it tended to underplay the effects through piecemeal detail. As we responded to the Inspector's question during our submission: *The Inquiry has been given a series of small pieces of a jigsaw; what it has not been given is the full picture.* The ecosystem approach is essential, which is why the Welsh Government has been encouraging it for the past two years ¹⁶⁴.
- 6.2 The diagram produced by DECC ¹⁶⁵ shows clearly the land take required to produce 26TWh per year. Hinkley Point C takes 430 acres; you will note that following the 250,000 acres that is shown for onshore windfarms a note states that in fact DECC estimates that the land take could be between 160,000 and 490,000 acres.
- 6.3 The Alliance has demonstrated that the incremental destruction of countryside that is of low agricultural value and of low population is destroying our wildlife. The shameful lack of use of the available legislation has decimated the habitats and wildlife that we knew as children.
- 6.4 The State of Nature report ¹⁶⁶ and its launch ¹⁶⁷ are clear; what has been allowed to happen over the past 50 years is nothing short of a disgrace, which should make many public servants unable to sleep at night. This can change, we can reverse the decline, but only if we make use of the policies and legislation available, now.
- 6.5 Degradation of habitat reduces carrying capacity still further, irrefutably affecting species' ability to survive, damaging the biodiversity of the area, probably permanently. This is in contravention of NERC 2006 ¹⁶⁸ 'Biodiversity Duty' to habitats and species of principal importance.

¹⁶³ As supplied to the Inspector, main parties, and the Inquiry library

¹⁶⁴ See appendix

¹⁶⁵ ALL-S4-POE-06 §§2 & 3 & diagram

¹⁶⁶ http://www.rspb.org.uk/Images/stateofnature_tcm9-345839.pdf and appended

¹⁶⁷ <https://www.youtube.com/watch?v=FnJQjtvngqA>

¹⁶⁸ NERC section 40 & 42

- 6.6 The Alliance has drawn attention to the impact on water levels not only within the county, but in Shropshire, Herefordshire, Worcestershire and Gloucestershire. The effect is not just flood risk, but from lack of agricultural water supplies through the drier periods.¹⁶⁹ This is affecting arable and soft fruit production.
- 6.7 Evidence of the effect on aquatic life has been provided, showing the wider impact that the identified pollution of exceptionally pure upland streams, for example Afon Gam, has on a range of species. Salmonids, mayfly and other invertebrates are the first to suffer, but the consequences travel through the food chain with species suffocating, starving to death and some dying out¹⁷⁰.
- 6.8 The Alliance evidence has informed the Inquiry of the particularly high water quality in the Montgomery Canal, which is itself a SAC; unusually it is fed by the Cambrian uplands. Expert advice from Montgomeryshire Wildlife Trust has stated that this will undoubtedly be affected¹⁷¹.
- 6.9 The 5 windfarm applications are in the uplands, and much of the SPM line is, too. Alliance evidence has shown that the carrying capacity of the uplands of Mid Wales is lower than that of Scotland, for example. This means that the wildlife requires more space and more feeding grounds¹⁷² because there has been greater agricultural improvement than in Scotland.
- 6.10 Hen harriers require at least 10 sq km and without this will fail to breed and may die out. Hen harrier are present in this area and are currently breeding successfully; however they appear to be on the verge of extinction in England. Hen harrier is listed on Annex 1 of the EC Birds Directive (2009/147/EC) because it is considered vulnerable within Europe, and is included on the red-list of birds of conservation concern in the UK.¹⁷³
- 6.11 Curlew, the largest European wader¹⁷⁴, is not only particularly shy, it also has a very long nesting season; from the beginning of March to the end of August. Curlew are present on all the proposed sites, and at a number of sites along the route proposed by SPM; although it is noted that Llanbadarn Fynydd's 2007 survey recorded one curlew 575m from the nearest proposed turbine location, beyond the site boundary. They are of Amber status¹⁷⁵ and of conservation concern. Activity where they are known to be, from 1st March to

¹⁶⁹ ALL-S4-POE-06 §5.6

¹⁷⁰ ALL- S4-POE-06 §6

¹⁷¹ ALL-S4-POE-06 §15

¹⁷² ALL-S4-POE-06 §7

¹⁷³ [jncc.defra.gov.uk /pdf/jncc441.pdf](http://jncc.defra.gov.uk/pdf/jncc441.pdf)

¹⁷⁴ ALL-OHL-POE-04 §49

¹⁷⁵ Birds of Conservation Concern [www.rspb.org.uk /images/BoCC_tcm9-217852.pdf](http://www.rspb.org.uk/images/BoCC_tcm9-217852.pdf)

31st August is impossible; disturbance occurs within 600 metres and is illegal¹⁷⁶.

- 6.12 Grid connections for five of the applications have not been addressed by statutory bodies; however, the Alliance draws the Inquiry's attention to the existing Habitat Management Agreement that is an intrinsic part of the planning permission for Tir Gwynt. Any reduction or change to the HMP would require statutory agreement and that would of course have to meet similar legislative requirements. A loss of over 30 acres from that agreement for the proposed sub-station site would be significant on a site that has significant deep peat and is a prime breeding ground for curlew and has more than 80 bird species recorded.
- 6.13 The Alliance draws attention to the value of ancient woodland, for its exceptionally stable habitat and unique ecosystem¹⁷⁷ as well as the number of such sites within the area of concern to this Inquiry¹⁷⁸.
- 6.14 The Alliance supports the statutory bodies' conclusion, that survey work has been inadequate, where they have checked it. However, the Alliance is particularly concerned that little evaluation of the surveys has been done on Llanbrynmair Moor and there has been an acceptance of data on some other sites such as Llandinam.
- 6.15 The Alliance noted that contrary to the assertions given previously Mr Seaton admitted on Thursday 22nd May, that the peat on Llandinam is indeed heavily degraded.
- 6.16 Evidence regarding bats and other protected mammals has been brought by NRW and PCC. The Alliance supports their position, particularly with regard to the lack of knowledge of the impact of windfarms on bats in the UK. This is entirely because the work has not been done here, it has been undertaken in Europe and North America. Evidence there demonstrates adverse impact on bats¹⁷⁹.
- 6.17 The Alliance notes the difference in the number of bat species recorded by RES (at least 5) and RWE (9) and draws the Inquiry's attention to this and the assessment of RES survey effort by PCC and NRW.
- 6.18 It is therefore disappointing that the statutory bodies have not registered strong objection regarding the certainty of bat deaths acknowledged by the developers on Llanbrynmair Moors.

¹⁷⁶ ALL-S4-POE-06 §§8,9,10

¹⁷⁷ ALL-S4-POE-06 §12

¹⁷⁸ ALL-S4-POE-06 §18

¹⁷⁹ ALL-S4-POE 06 §14 & appendix 2

- 6.19 The Alliance sees the proposed developments as the death knell to any attempt to restore the biodiversity of Mid Wales. This Inquiry sits at what could be a turning point, or the thin end of the wedge.
- 6.20 Legislation detailed within Alliance evidence provides the tools to recommend refusal of all these applications. Hair-splitting and a piecemeal approach does not ever benefit ecosystems, biodiversity or ultimately, us.

Section 7: Health and Noise

Alliance Inquiry Documents ¹⁸⁰
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ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-04, ALL-OHL-POE-07, ALL-S4-POE-07, ALL-S4-POE-08, ALL-NOISE-NOTE-S4, ALL-NOISE-NOTE-S4-ADDENDUM
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Health effects

7.1 We reproduce below the conclusions from Dr Myhill's proof of evidence for Session 4 ¹⁸¹.

12. **Conclusions drawn from scientific evidence and previous rulings**

- i) Wind turbines produce at least three types of disturbance namely broadband noise, Amplitude Modulation (AM) (sometimes called OAM) and infrasound.
- ii) Broadband noise, AM and infrasound can cause intolerable distress and damage to human health. The health effects of turbines result from their emission of broadband noise, AM and infrasound. The larger the wind turbine, the more broadband noise, AM and infrasound is produced with potential for damaging health effects which can, in certain topographical situations, extend to several kilometres from turbines.
- iii) Characteristic symptoms and potentially serious health consequences are a reality for some people who live near windfarms. Witness statements and video links are referenced.
- iv) Expert advice to lower wind turbine noise limits and protect residents has been provided to Government.
- v) Some turbines have had to be taken down or switched off because of noise impacting on local people and some of those living close to turbines have been forced to leave their homes. Where they have been able to find a buyer people have suffered a significant loss in property value.

¹⁸⁰ As supplied to the Inspector, main parties, and the Inquiry library

¹⁸¹ ALL-S4-POE-07 Noise and Health §§ 12 - 14

- vi) The potential effects of turbines are causing recommendations to be made on increasing separation distances between turbines and homes. Both variations in topography and turbine height have to be taken into account.
 - vii) A growing number of health practitioners, researchers and acousticians have publicly expressed concern regarding wind turbines and health.
13. Taking into account the increasing body of clinical evidence, and for avoidance of future adverse effects, the Alliance believes that should approval for any of the windfarms before this Inquiry be recommended, it should only be given subject to conditions for Amplitude Modulation which are similar to those used in the Den Brook Decision, which drew up protective criteria. The permanent noise monitoring exercise method of Cotton Farm is established and should be used to ensure compliance (see Appendix paragraph 17)
14. The Den Brook Amplitude Modulation (AM) noise condition criteria were designed to ensure:
- i) Modulation of the noise level as identified within ETSU-R-07 as typical of wind turbines (a peak to trough of 3dB); that occurs for a period of no more than 10 seconds in any 1 minute period; and more than 6 times in an hour (i.e. a total of 1 minute exposure in an hour) is considered a breach of the condition.
 - ii) The normally applied ETSU derived noise limits are replaced by using a firm scientific basis for assessing claims of unreasonable, unacceptable and intolerable noise impacts from windfarm developments throughout the UK.

The practical objective of the Den Brook AM condition was to give all parties clarity, as well as sparing neighbours and developers the trouble, expense, and uncertainty of private nuisance actions

7.2 Dr Myhill's evidence was not questioned at the Inquiry.

Amplitude Modulation

7.3 We refer the Inquiry to the papers submitted by Mr Weller¹⁸². The careful analysis contained within the first justifies the conclusions he reaches which the Secretary of State is invited to accept.

¹⁸² ALL-NOISE-NOTE-S4 (and ALL-NOISE-NOTE-S4-ADDENDUM)

- 7.4 The severity of the impact of AM has belatedly been accepted by the wind industry, and in December 2013 the trade body RenewableUK published extensive research into the causes and effects of the phenomenon. ReUK also recognised the need for a planning condition on AM and published a template planning condition. Unfortunately, some aspects of the research and the template planning condition have drawn severe criticism, and the Institute of Acoustics have not been able to endorse the work.
- 7.5 Mr Weller also provided the Inquiry with papers published by MAS Environmental highlighting the issues with these sorts of effects and one from REF which shows the failings of the RUK condition¹⁸³. There is a potential problem with serious consequences which, just as much as with 'ordinary' noise, needs to be addressed by condition. It is not acceptable to leave the matter open to the unpredictable outcome of public or statutory nuisance proceedings. It is a phenomenon which was skirted around by the windfarm industry for years but now finally recognised, and it needs to be dealt with.

¹⁸³ ALL-NOISE-NOTE-S4

Section 8: Grid Connections

Alliance Inquiry Documents ¹⁸⁴
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ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-01, ALL-S4-POE-08

- 8.1. For the four windfarms of Llanbadarn Fynydd, Llaithddu, Llanbrynmair and Carnedd Wen that are before the inquiry it is necessary for a method of exporting their power to be identified and assessed.

LAN enhancement scheme underpinning TAN 8 SSA selection

- 8.2. As spelt out in the Arup report of 2004 ¹⁸⁵ one of the central criteria for the Strategic Search Areas was that they should be within 10 kilometres of a suitable electrical network system that could take more than 100 MW of new on-shore wind capacity. It was identified that the Local Area Network (LAN) in mid Wales would not be able to accommodate very much more windpower and therefore did not satisfy the above criteria ¹⁸⁶.
- 8.3. However Manweb in 2003/4 were seeking capital funds for a scheme, according to the Arup report (and explained in a further report by AEA Technology Environment) ¹⁸⁷, to enhance the LAN through mid Wales to the western mid Wales area as far as Aberystwyth. This project, according to the Arup report ¹⁸⁸, was used to justify the three SSAs in Mid Wales and as it was an enhancement to the LAN it would have provided more load capability for users of the network as well as allowing more 'embedded' windpower to be built. It is obvious that this is the scheme that is described in TAN 8 Annex C paragraph 2.13 when saying:
- 'providing a stronger more reliable network for electricity users in the Western mid Wales area'*
- as it describes the scheme being put forward for capital funding at that time.
- 8.4. The LAN enhancement scheme did not receive approval and a completely different scheme has been worked up by SP Manweb and National Grid that has no relationship whatsoever with the Local Area Network or electricity users in mid Wales. This scheme, which the Inquiry has heard about in outline, is a scheme for exporting electricity. It would take power from the four

¹⁸⁴ As supplied to the Inspector, main parties, and the Inquiry library

¹⁸⁵ ALL-009 p 6 §§5.2, 5.3

¹⁸⁶ ARUP 2004 p 61 §5.3.4

¹⁸⁷ ALL-S4-POE-01 p 7 §10.3

¹⁸⁸ ARUP 2004 p 62 §5.3.4

above windfarms through 132kV lines to a 'hub' near Cefn Coch and then onwards via a 400kV line to a connection to the present UK national grid 400kV line near Lower Frankton in Shropshire. As it would have no connection with the LAN and would only take power out from the windfarms to the UK national grid it can in no way satisfy 'providing a stronger, more reliable network for electricity users in the western mid Wales area'.¹⁸⁹

Alternative connections

- 8.5. At the request of the Inspector the applicants have been tasked with identifying how the power output of their windfarms could be exported if the following wishes of the Welsh Government as expressed in the Griffiths letter¹⁹⁰ were taken into account:
- 'Provided development is limited to the maximum capacities, we do not believe that there is a need for the large, visually intrusive, high voltage grid network infrastructure and associated sub station of the kind proposed within Mid Wales.'*
- 8.6. The response has been the Mott MacDonald and LUC reports¹⁹¹. These have identified options for exporting the power using 132kV systems only and the Alliance has carried out a careful analysis which is summarised below¹⁹². No operator either of windfarms or connections has said at the Inquiry that any of these schemes are likely to be promoted.
- 8.7. Because of the length of transmission required the Mott MacDonald report identifies that there are risks in this approach with respect to voltage regulation, transmission losses (36 times the loss compared to 400kV), dynamic stability and possible operational constraints¹⁹³. It is noteworthy that SP Manweb has dismissed such 132kV schemes in its optioneering assessments (Gary Swaine statement¹⁹⁴) because the losses would be too great. The Alliance has provided evidence to identify those risks, as well as emphasising that the LUC report has undertaken no environmental assessment on the greater part of the options identified and in many instances has gone no further than drawing a route on a map¹⁹⁵.
- 8.8. In order to avoid the 400kV systems the options have replaced it with one or two 132kV lines from the Cefn Coch area to the 400kV national system at

¹⁸⁹ ALL-S4-POE-01 p 7 §10.3

¹⁹⁰ ALL-011B Tab 9

¹⁹¹ Mott MacDonald report Inquiry references: SEI/CUMULATIVE/GRID/2, AD/VATT/021, AD/FWLC/052, AD/RES/040 and AD/RWE/031. LUC report ,appendices and figures Inquiry references: SEI/CUMULATIVE/GRID/3, AD/VATT/022(a,b), AD/FWLC/053(a,b), AD/RES/041(a,b), AD/RWE/032(a,b)

¹⁹² ALL-S4-POE-01.

¹⁹³ ALL-S4-POE-01 p 4 §§4.7, 4.8 & 4.9

¹⁹⁴ OBJ-702-02 Gary Swaine Statement Session 4

¹⁹⁵ ALL-S4- POE-01 p 3 §3.4 & §4.2, p 5 §5.1, p 5 §§6.2 & 7.1, p 6 §8.2 and p 6 §9.2

Legacy. Once again this system does not form part of the Local Area Network, is not connected to it and only takes power out from the windfarms to the national grid. It therefore cannot satisfy the words in Tan 8 Annex C paragraph 2.13: *'providing a stronger, more reliable network for electricity users in the western mid Wales area'* and which the 'Griffiths letter' reinforces.

Exporting power from SSA D

- 8.9. The Inspector has asked for clarification in Closings as to whether this system would be able to satisfy the requirements of exporting power from a Nant-y-Moch windfarm in Strategic Search Area D, and also whether or not this would satisfy the above Annex C requirements for electricity users.
- 8.10. The position as regards the actual proposed Nant-y-Moch scheme is, we believe from correspondence that residents who live in the area have received, that it has been withdrawn.
- 8.11. Taking the theoretical case that a scheme could be required to export wind power from that area to Cefn Coch and thence from there to the grid, the losses at 132kV over the entire length would obviously be substantial. The technical issues flagged by Mott MacDonald would be substantial over that length and it would appear that SP Manweb would not consider it if they were worried about the losses on just the much shorter Cefn Coch to Legacy section.
- 8.12. As regards the requirement to satisfy the Annex C electricity users' requirements the scheme fails again as the system is only to take windpower out from the windfarms to the national grid. It has no relationship to the LAN and is not connected to it.
- 8.13. It therefore appears to the Alliance that the 400kV and 132kV schemes cannot satisfy the Welsh Government aim of *'providing a stronger, more reliable network for electricity users in the western mid Wales area'*. The only way to so do is by the original Local Area Network enhancement scheme, as was proposed by Manweb and is spelt out in the Arup and AEA Technology Environment reports, which reached across to the Western Mid Wales area. It however would appear that such a scheme would not attract the necessary approval.
- 8.14. "The Inquiry has been led into an analysis of possible alternative means of making the grid connection. Whilst this may be a productive approach to an examination of the risks warned of in EN1, it is of no assistance at all in meeting the imperative for the provision of sufficient information to meet the Directive and UK Policy. Furthermore the weight to be given to any information gained from these analyses must be so limited as to be unable to

form part of the basis for a decision by the Secretary of State on the wind farm applications. For National Grid's Mid Wales Connection an extensive route selection process has been undertaken by National Grid. The matter has been in the public domain for 18 months, and no doubt in the private domain of National Grid for much longer. It has involved widespread consultation on multiple route corridor possibilities covering wide areas of Shropshire and the borders, and even now no firm route has been proposed. By comparison, the analysis of alternative connections carried out in the Inquiry amounts to no more than the back of an envelope.”¹⁹⁶

Conclusion

- 8.15. The Alliance invites the Secretary of State to share the conclusion drawn in ALL-S4-POE-01¹⁹⁷ that:

“... all the [Mott MacDonald] options (1 - 8a) are not considered to be acceptable, economically feasible, satisfy policy requirements, and/or do not have any information that can possibly satisfy the requirement in EN-1 paragraph 4.9.3 i.e. *‘and must ensure they provide sufficient information to comply with the EIA directive including the indirect, secondary and cumulative effects, which will encompass information on grid connections.’*”

- 8.16. Even if the Secretary of State is persuaded that he can and has carried out an assessment of their effects as impacts of the current windfarm proposals, he has no material from which he could conclude that there was any realistic prospect of any of those options actually being promoted so that he had actually addressed the likely impacts of the windfarms at all. The Alliance sees that there is a much more realistic prospect that if permissions are given for any one or more of these proposed windfarms, that will lead to them contributing to an overall total which will support the 400kV proposals which are still being worked on. Whilst any 400kV line would support more “EN-1 contributions” that would come with yet more environmental damage from any further windfarms. Thus what would be at least an indirect effect of the windfarms being considered here will have been left out of account in the decision-making process for the windfarms which are under consideration here. As pointed out above, it is this sort of risk which EN-1 sets out to avoid. The Inquiry has some general appreciation of the sort of impacts which a 400kV may bring¹⁹⁸, but no complete assessment. The Secretary of State cannot just assume that there will be no 400kV for the purposes of assessment: and an exercise which starts from that hypothesis takes him no further.

¹⁹⁶ OBJ-009-S4-POE-01A p 5 §11, statement by David Ward (retired Field Principal Planning Inspector in England) as a member of SNAP (part of the Alliance)

¹⁹⁷ ALL-S4-POE-01 p 8 § 11.1

¹⁹⁸ eg OBJ-008-POE-S4-MAP, OBJ-003-GENERAL-POE-S4, OBJ-003-LAND-POE-S4

“SSA C sites”

Section 9 : Llanbadarn Fynydd

Section 10: Llaithddu

Section 11: Llandinam

Section 12: Llandinam 132kV line

Section 9: Llanbadarn Fynydd (VATT)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30% load factor)¹⁹⁹	Grid Connection	Contribution to 15% target²⁰⁰
17	59.5MW ²⁰¹	156,366 MW	None included	0.13%
Alliance Inquiry Documents²⁰²				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

- 9.1 This scheme application is for 17 turbines. As stated in the footnote below, the application is for a maximum output of 59.5MW which would entail turbines of 3.5MW capacity each. However, the 2007 ES states that the candidate turbine will have a power output of only up to 3MW. It is situated such that it has severe negative effects on many aspects of Powys’s landscape, visual amenity and residents’ wellbeing.

EN-1 Contribution²⁰³

- 9.2 The installed (or ‘nameplate’) capacity of 59.5 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment,

¹⁹⁹ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable’s evidence) on the basis of the parameters described

²⁰⁰ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable’s evidence) on the basis of the parameters described

²⁰¹ The application is for a maximum output of 59.5MW which would entail turbines of 3.5MW capacity each. However, the 2007 ES states that the candidate turbine will have a power output of only up to 3MW (ES 2007 p4 Section 1.3, 3rd §). The Vestas V90 3MW turbine has been used in noise assessments (SEI Feb 2013 Vol I Section 4.4 3rd para)

²⁰² As supplied to the Inspector, main parties, and the Inquiry library

²⁰³ EN-1 §4.1.3

and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC) ²⁰⁴.

- 9.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.13% ²⁰⁵. And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% ²⁰⁶. CO2 savings are assessed at about 0.05% of UK national emissions (on the basis of a grid average emissions factor) ²⁰⁷.
- 9.4 In a nutshell, that encapsulates the “contribution” from the VATT proposals (before any transmission losses along the Grid or CO2 costs from Grid infrastructure is addressed – there is no grid proposal to assess).
- 9.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 9.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Siting of windfarm

- 9.7 The windfarm is positioned on an ‘upland’ area which although mostly above 400m altitude is populated by the small village of Llanbadarn Fynydd and other isolated properties. Although from the altitude one would predict it was remote, the western part of the windfarm would be extremely visible from the A483 Llandrindod Wells to Newtown trunk road. Users of numerous small country roads leading to small villages and isolated properties would also experience significant visual intrusion from the windfarm.
- 9.8 As shown in Alliance documentation ²⁰⁸ and the SSA map produced by Enplan ²⁰⁹ over half of the turbines are outside of the original TAN 8 SSA C area.
- 9.9 The eastern part of the site is remote and the windfarm visibility from upland areas that are traversed by Glyndwr’s Way National Trail and the promoted Kerry Ridgeway Regional Trail is extensive.

²⁰⁴ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

²⁰⁵ Constable, ALL-SSAC-POE-03 p16 Table 6

²⁰⁶ Constable, ALL-SSAC-POE-03 p18 Table 7

²⁰⁷ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

²⁰⁸ ALL-009 para 11.4

²⁰⁹ CD/002/003

Landscape and Visual Amenity

- 9.10 A good representation of the landscape in which the proposed windfarm would be situated is seen in the photomontage at the high point at Rhiw Porthnant²¹⁰. The landscape witness for VATT was at pains to point out that the landscape of the site is characterised by intensive agriculture, post and rail fences, modern houses and farm buildings. The above photograph fully illustrates that before the installation of turbines the landscape is in no way so characterised but is, as local people and visitors value, dramatic, unspoilt and with far reaching upland and valley panoramic views.
- 9.11 As can be seen in the second illustration with the turbines they are overwhelming and because they are located at many different altitudes conspire to produce a particularly unsightly arrangement at this and other locations. In addition to the effect upon the upland landscape the intimate valley of Cwm Nant Ddu will be overwhelmed by turbines. This valley has a High Landmap Visual and Sensory rating and was rated Outstanding in an earlier classification. A photomontage in the ES²¹¹ shows that the turbines still appear massive even at a distance of 1.8 kms from the valley (the valley can be seen in the middle distance).
- 9.12 In order to fully appreciate the distinctive landscapes of Mid Wales, Glyndwr's National Trail was devised. As called up in our landscape proof²¹² the 1990 feasibility study says 'much of the special quality of the Way lies in the extraordinary extensive views it presents to the walker, and in the constant flux of those views.' Llanbadarn Fynydd windfarm would seriously affect this Trail. As the VATT wireframes and photomontages verify, the wind farm will be a prominent feature on the uplands north east of the village of Llanbadarn. For example, the photomontage at Bryn Mawr Cottage²¹³, 1.6 kms from the nearest turbine, demonstrates how a huge unspoilt landscape will be altered negatively for Glyndwr's Way walkers, and residents alike.
- 9.13 As the Trail drops down to the village of Llanbadarn along Fron Top, the windfarm will dominate the experience as the photomontage at Fron Top shows²¹⁴.
- 9.14 South of Llanbadarn village on the Trail the windfarm will still be a defining feature from the Moel Dod Hills at 3.3 kms distance as can be seen in the photomontage from there²¹⁵.

²¹⁰ Llanbadarn Fynydd ES Fig 7.11 (i & ii)

²¹¹ Llanbadarn Fynydd ES Fig. 7.11 (ix & x)

²¹² ALL-SSAC-POE-04 § 32

²¹³ Llanbadarn Fynydd ES Fig. 7.11 (v)

²¹⁴ Llanbadarn Fynydd Fig. 7.11 (viii)

²¹⁵ Llanbadarn Fynydd ES Fig. 7.11 (xv)

9.15 Varying numbers of turbines will be as visible to walkers, as is depicted in these illustrations for some 8 – 9 kms of Glyndwr’s Way between Bryn Mawr and Moel Dod ²¹⁶. This will be extremely detrimental to the enjoyment of the Trail for visitors and residents. This serves to demonstrate the impact on valued landscapes more generally and as our landscape expert says ‘In my opinion the landscape is characterised by a strong sense of tranquillity and remoteness, and by its distinctive historic character.’²¹⁷

Residents

- 9.16 There are many residents who will experience an effect upon their visual amenity. The developers acknowledge there are 13 properties which would experience a significant effect. However, looking at the wireframes ²¹⁸ it appears that in the order of 14 other properties are also significantly affected but the developers do not categorise them as such because of screening by trees or buildings. This ‘screening’ takes no account of leaf fall or of the right of residents to full use of the curtilage of their properties.
- 9.17 There are 14 properties less than 1km from the closest turbine. Particular note is made of the effect upon residential amenity at Lower Cammant, Lower Foel, Escair Draenllwyn, Crochan and Bryn Mawr Cottage.
- 9.18 Although the analysis by Nuon on residential properties has been more comprehensive than some, it is of concern that at Lower Foel the projected view direction of the photograph was not towards the windfarm. This error raises concerns as to the accuracy of the analysis of the effect upon properties.
- 9.19 Regarding private water supplies, the Inquiry heard evidence ²¹⁹ in questioning of the hydrology expert that the surveying of the private water supply at Fiddlers Green was completely erroneous. As with the analysis of visual amenity we have similar concerns regarding the validity of the water supply surveys. Obviously if the scheme were consented rigorous conditions would be necessary to protect the health of residents.
- 9.20 The increase in local construction traffic with a possible 28% increase in HGV flows ²²⁰ on the A 483 is of concern especially considering the very constrained nature of the road between Newtown and Dolfor and its poor safety record.

²¹⁶ see ZTV map in Llanbadarn Fynydd ES Fig 7.10 (iii)

²¹⁷ ALL-SSAC-POE-04 § 50

²¹⁸ Llanbadarn Fynydd ES 2007 Vol 2 App B

²¹⁹ OBJ225_GENERAL-POE-FLANDERS-DDA-C section 4

²²⁰ ALL-SSAC-POE-06 § 31

9.21 The application is for a 59.5 MW windfarm consisting of turbines of 3.5 MW capacity. The candidate turbine used for modelling is a 3 MW Vestas V90 machine ²²¹ and for the noise assessment is modelled in Mode 3. This Mode gives a lower noise output than the normal Mode 0 operation. The Alliance raised concerns in their Statement of Case ²²² that residents could be subjected to higher noise levels when a more powerful 3.5 MW machine running in Mode 0 may be installed. In his evidence ²²³ Mr Humpheson, expert witness on noise and health, responded that ‘Regardless of the final turbine type and operating Mode, Vattenfall will need to ensure that turbine noise levels meet the agreed noise limits. A condition has been drafted which will require Vattenfall to demonstrate compliance with the noise condition for a range of wind conditions.’ The Alliance is adamant that such a condition is required if permission were to be granted to ensure that such a possible change in size of turbine and different noise characteristic is properly agreed before construction.

Cultural Heritage

9.22 The Inquiry has heard of the important ‘prehistoric landscapes’ that are evident in the SSA C. There are many Scheduled Ancient Monuments (SAMs) of prehistoric date within 5 kms of the windfarm application site.²²⁴ The scale of the proposed turbines means they will affect the setting of a considerable number of these. It is acknowledged that inter-visibility between these various sites is important in understanding their significance. The open expansiveness of this prehistoric landscape is particularly important in permitting this understanding, for example the relationship that involves Two Tumps, Fiddlers Green Barrows and Fowlers Armchair.

9.23 As regards the effect upon particular heritage assets there are three of special concern.

i) **Fiddlers Green Barrows (SAM RD084)**

These three round barrows are located 0.8 kms from the nearest turbine. As can be seen from the photomontage at Rhiw Porthnant (adjacent to the SAM) the setting will be severely affected. The Alliance has shown in evidence ²²⁵ that the developer’s argument that the effect is not even significant cannot be justified.

²²¹ Llanbadarn Fynydd ES Ch.8 Noise p.213

²²² ALL /SOC/SSA-C § 20

²²³ VATT –NOISE-POE-HUMPHESON-SSA-C § 5.20

²²⁴ Llanbadarn Fynydd ES map

²²⁵ ALL-SSAC-POE-05 §§ 15-18

ii) **Blaen Nant Ddu Grade II Listed Building**

This building is located near to the Rhiw Porthnant photomontage referred to above. It is only 0.6 kms from the nearest turbine. The wireframe²²⁶ shows that 15 turbines will be extremely visible having a severe effect upon its setting. As the legislation requires, special regard must be taken with regard to listed buildings.

iii) **Two Tumps (SAM MG 048)**

These two round barrows are prominently situated at the end of the Kerry Ridgeway Regional Trail. Although the windfarm is 3.3 kms from here²²⁷ it will significantly affect the setting of this much valued location with its qualities of openness and remoteness that permit quiet contemplation of the SAM's significance. The Trail here is also located on the ancient Kerry Ridgeway track which is reported to be a Drove Road of pre-Iron Age provenance²²⁸. The loss of the special qualities of this location would be of special concern, as has been heard at the Inquiry, to local people.

²²⁶ Llanbadarn Fynydd ES p. A37

²²⁷ L/F ES 2007 volume 3 photomontage Fig 7.11 (xvii)

²²⁸ ALL-SSAC-POE-05 § 19 - 22

Section 10: Llaithddu (FWL)

Introduction

Turbines	Nameplate capacity	Annual output (@ 29.8% load factor) ²²⁹	Grid Connection	Contribution to 15% target ²³⁰
27	62.1MW	162,111 MWh	None included	0.14%
Alliance Inquiry Documents ²³¹				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

- 10.1 Llaithddu is sited on an upland plateau ridge and consists of a single depth 7.5km long array of 27 turbines making the windfarm peculiarly visible over long distances and in the extent to which it occupies the view. This dominance in isolation would be exacerbated in combination with the proximate Llandinam Repowering and proposed Hirddywel schemes. There is a 1km gap between the northern 12 turbines (nos. 3 to 14) and the southern 15 (nos. 15 to 29). 17 turbines are on Open Access land and turbine 6 is on Common Land.
- 10.2 Contrary to what is stated in the WG letter to the Inquiry²³², the site is outside the original SSA C area and, as agreed in the Statement of Common Ground between developers and Powys, there is no adopted refined area.

EN-1 Contribution²³³

- 10.3 The installed (or 'nameplate') capacity of 62.1 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)²³⁴.

²²⁹ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

²³⁰ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

²³¹ As supplied to the Inspector, main parties, and the Inquiry library

²³² CON-001-002, ALL-09 pp21 §11.4

²³³ EN-1 §4.1.3

²³⁴ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

- 10.4 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.14%²³⁵. And in terms of its contribution to security of supply of the GB system, would contribute about 0.02%²³⁶. CO₂ savings are assessed at about 0.05% of UK national emissions (on the basis of a grid average emissions factor)²³⁷.
- 10.5 In a nutshell, that encapsulates the “contribution” from the FWL proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed – there is no grid proposal to assess).
- 10.6 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 10.7 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Habitat and Hydrology

- 10.8 The site encompasses areas of blanket bog, acid flush and heath. Although the turbine siting attempts to avoid the deepest areas, the ES admits that installation and access tracks will affect peat. The Northern part in particular affects carbon rich soils where turbines are on peat up to 30 cms depth. This is contrary to the advice of TAN 6 and PPW²³⁸ that states the need to ‘*promote the functions and benefits of soils, and in particular their function as a carbon store*’
- 10.9 Dr Harvey Rodda²³⁹ in a detailed review of the Llaithddu hydrological information concluded that a predictive hydrological model or further data on the baseline environment was essential to a full understanding of the impacts of the proposed construction on this sensitive site. He identified an incomplete analysis of the drainage network; soils and geology; hydrological regimes; ground water quality; flood risk from ordinary water courses and the impact of peat for water quality and storage. Potential changes in hydrology during construction, operation and decommissioning or the impacts of the wide access roads, drainage swales and cable trenches, cannot be confidently arrived at by the Inspector or the Secretary of State.

²³⁵ Constable, ALL-SSAC-POE-03 p16 Table 6

²³⁶ Constable, ALL-SSAC-POE-03 p18 Table 7

²³⁷ Constable, ALL-SSAC-POE-03 p120 §§53-56 and Table 8

²³⁸ PPW6 § 5.1.2

²³⁹ Dr Harvey Rodda ALL-SSAC-POE-02

- 10.10 The impact of removing surface vegetation and 18,689 cu m of peat from a fragile upland habitat has not been properly assessed. There is a risk of sedimentation or acidification of the surrounding areas which are of British Action Plan and European Habitat Directive importance and drain to the Wye SAC and the Severn. Construction can cause silting that is highly damaging to aquatic life. Experience at existing Mid Wales windfarms such as Cefn Croes shows that Management Plans can be ineffective in the protection of such sensitive sites.
- 10.11 Evidence of the rapid rate at which damaged peat dies back and the slow and uncertain regeneration of peatlands²⁴⁰ is not taken into account when assessing damage to fragile ecosystems; carbon release; loss of carbon capture resource; loss of water storage and release facility and the potential acidification of stream water.
- 10.12 Dr Rodda further comments on the lack of consideration given to the added impacts of hard surface run off and the very large on-site borrow pits. Impermeable concrete areas for turbine and crane pads will be situated on the most exposed, highest altitude areas where, in terms of local weather conditions, there is the most rainfall. This will lead to higher peak flows downstream increasing frequency and severity of flooding. Conversely peat removal and die back will result in streams more likely to dry up under low flow conditions.
- 10.13 Should Llaithddu and Llandinam windfarms both be consented, cumulative effects could impact on the Wye SAC with flood risk heightened by the 103 concrete bases, crane pads and access tracks remaining at the decommissioned Llandinam P & L site.

Wildlife

- 10.14 The area of unspoilt upland represents excellent and diverse habitat. As the NPPF on Biodiversity states²⁴¹ the planning system should contribute to and enhance the natural and local environment. The Alliance would endorse that approach.
- 10.15 FWL recorded 35 species of breeding birds on or adjacent to the site with five of these being on the Red List and eight Amber List species. Hen Harrier and other raptors present are susceptible to turbine blade strike due to their flying height and habits. The Ridge is particularly important for soaring for Red Kite. FWL calculates that Red Kite turbine collisions could be as high as 5.88 per

²⁴⁰ ALL-SSAB-POE-05

²⁴¹ NPPF § 109 Biodiversity

year. No updated figures have been supplied and this significant risk must be weighed in the planning balance.

- 10.16 Five types of bat are present on site including the Noctule whose foraging and flight patterns deem it especially at risk from turbines. Given the difficulties of measuring fatalities post construction appropriate mitigation may not be undertaken.
- 10.17 Following concerns from statutory consultees and the Alliance, FWL undertook to make further surveys and assessments on Red Kite, badgers, Great Crested Newts and bats during 2013 and to issue a new SEI for consultation. Although an Updated Protected Species report was provided belatedly in mid-May, making it difficult to properly assess the detailed information, no SEI has been issued and there is no update on the Red Kite collision figure. It must therefore be assumed that it stays at the high figure of 5.88 collisions per year.

Cultural Heritage

- 10.18 The site is particularly important and appreciated for the inter-related archaeological remains and cultural heritage associations of the Brondre Fawr which attracts UK and international visitors.
- 10.19 Earis²⁴² points out that the Brondre Fawr megalithic complex depends upon its landscape setting. The shapes and contours of the north to south ridge, the east, west and south horizons and marker stones were probably used with astronomical observations to mark the passage of time and create part of a wider burial complex and ritual site with Fiddler's Green and Two Tumps barrows²⁴³. The setting of the Bronze Age SAMs, Fowler's Armchair and Cairn, will be completely overpowered by two turbines within 250m²⁴⁴ and the proximate sub-station. This is shown in the southern perspective photomontages brought to the attention of the Inquiry by the Alliance²⁴⁵.
- 10.20 The inter-relationships between ridges is part of the understanding of these sites and would be completely lost. As Earis observes:

'the rarity of these carefully selected prehistoric locations in the modern era, after so much loss of landscape by buildings, roads and forestry, makes the preservation of Brondre Fawr all the more important.'

²⁴² Irene Earis MA ALL-S4-POE-04 Annex E

²⁴³ Photographic evidence provided to this Inquiry by T. Roper (handed to Inspector at SSAC public meeting.)

²⁴⁴ Figure from scaling off Powys SSA map as no figures provided by developer

²⁴⁵ FWL SEI June 2013 wireframe 10WF35 left and right and photomontage 10PM35 left and right

10.21 English Heritage guidance²⁴⁶ is unequivocal in stating that:

'Intentional inter-visibility between historical assets or between heritage assets and natural features can make a particularly important contribution to significance'.

Loss of such a relationship through intervening artificial structures is clearly to be avoided.

10.22 Planning Practice Guidance for Renewables²⁴⁷ states unequivocally that:

'Great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.'

The Alliance would request that the Inspector and the Secretary of State exercise that required care in determining the acceptability of these proposals balanced against the overwhelming loss of heritage value and visitor interest.

10.23 Mediaeval house platforms and a Bronze Age cairn are only 30 to 40m away from new access tracks so would be unlikely to escape damage.

10.24 That CADW have not maintained an objection is not unusual given they generally monitor actual physical damage to an artefact. As noted by Inspector Jones at the Bryn Llewellyn appeal²⁴⁸, lack of an objection does not necessarily indicate that the proximate siting of a turbine is acceptable to setting and interpretation.

10.25 Setting, interpreted as the landscape that can be seen from all directions, was the defining factor in rejecting the Toft Hill windfarm²⁴⁹. Inspector Mackenzie noted the

'extensive and open views to the north, south, west...can only be reached on foot, and the mystery surrounding its raison d'être, combine to give it a very special atmosphere' and that

*'the desirability of preserving a SAM's setting should be a material consideration in planning applications'*²⁵⁰.

There are marked similarities here with Fowler's Armchair except that the Dudo Stone was 1.7kms from the nearest turbine whilst the Llaithddu SAM is only some 200m.

²⁴⁶ English Heritage 2011 Section 2.3 Views and Settings p.6

²⁴⁷ Planning Practice Guidance for Renewables and Low Carbon Energy 2013 DCLG para 15 cited in ALL-SSAC-POE-05 § 9

²⁴⁸ Inspector Emyr Jones's report dated 16/01/2014, appeal refs APP/M6825/A/12/2189697, APP/M6825/X/13/515763 & APP/M6825/X/13/515764 Powys CC core document

²⁴⁹ Appeal Decision: Catamount Energy, Moorsyde Windfarm, nPower Renewables Ltd Northumberland (2009) Inspector Ruth MacKenzie. Alliance tourism & economy core document

²⁵⁰ ALL-SOCIOECO-REBUTTAL-S4-04 section 8

Visual and Landscape

- 10.26 Using FWL photomontages the Alliance has shown that, far from the assertion that views towards the site will be screened by hedgerows, settlements, buildings and garden vegetation²⁵¹, there is actually a paucity of such features in the area. It is difficult to give credibility to FWL assessments with such obviously inaccurate and misleading statements.
- 10.27 Significant effects will accrue on the Bwlch y Sarnau area and the scattered dwellings along the Llaithddu to Bwlch y Sarnau road and in the David's Well area. Llaithddu will be highly visible from parts of the A483 Llandrindod to Newtown road.
- 10.28 It is the entirety of the landscape that is crucial when considering turbine impact in views of Llaithddu but nonetheless noteworthy that the Landmap site classification is 'High' throughout the site for Visual and Sensory and parts are 'Outstanding' for Geological.
- 10.29 For the Alliance Mr Watkins states that, in his professional opinion, he would strongly dispute the claim that by the presence of Llandinam:
*'the area as a whole has been fundamentally changed to the extent that the entire landscape can be characterised as an existing windfarm landscape'*²⁵².
He also points out that the landscape impacts of the multiple new and upgraded tracks have not been assessed²⁵³. The Alliance believes these will have a very significant effect on the wider landscape.
- 10.30 Cumulatively, the northern Array will cause significant stacking in conjunction with Llandinam Repowering and this has not been ameliorated in many views by the removal of two turbines. Design good practice dictates that stacking should be avoided as should the exacerbating effect of an 11m turbine height differential.
- 10.31 The southern Array spreads turbines unacceptably right along a pristine ridge intruding visually on much wider vistas and having a potentially desensitising effect for further development.

Recreational Use: Public Rights of Way and National Trails

- 10.32 As TAN16 indicates access to the countryside is important to the rural economy and PPW²⁵⁴ states:
'Local Authorities should seek to protect and enhance the rights of way network as a recreational and environmental resource.'

²⁵¹ Llaithddu NTS p.61

²⁵² ALL-SSAC-POE-04 § 44

²⁵³ ALL-SSAC-POE-04 § 47

²⁵⁴ PPW6 § 11.1.13

As the Alliance has shown, rights of way for walkers and riders are a key component of the local tourism offer attracting day and staying visitors²⁵⁵. The National Prince Llewellyn's Ride and National Trail, Glyndwr's Way, are both proximate to the proposed turbines and a network of 25 PRowWs traverse the application site.

- 10.33 For users of Prince Llewellyn's Way and the Cross Wales Ride, turbines 17 - 23 are at a separation distance of less than 200m. BHS guidelines state that for a National Ride separation should be at least 4 times the height to blade tip i.e.450m here. This guidance has been completely ignored. A permissive route is proposed further from the turbines but uncertainty remains as to whether it can be progressed and it is not part of proposed conditions.
- 10.34 Grave concern has been expressed by the local British Horse Society group²⁵⁶ and Dr Myhill²⁵⁷ at the impact on the very popular Cross Wales Ride that follows Prince Llewellyn's Way. As the Alliance has shown, the bridleway is well used, particularly by younger and inexperienced Pony Club riders. An extensive National BHS survey²⁵⁸ provided to the Inquiry demonstrates the concerns of even experienced riders regarding shadow flicker, noise and sudden blade movement and the unique vulnerability of riders to turbines. The 130km ride from the Shropshire Borders to the West Coast of Wales would become less attractive for some riders and more problematic to promote. 'Mitigation' measures such as providing corrals or controlled turbine familiarisation days would be of limited use to most, especially visitors. It is ironic that the Cross Wales Ride route was planned specifically to avoid the Llandinam P & L windfarm.
- 10.35 Overall there are 16 turbines less than 100 m away from bridleways, with 4 oversailing and less than 35 m away²⁵⁹
- 10.36 Glyndwr's Way is considerably affected both in the approach to Bwlch y Sarnau from the South East and on leaving to the West. Walkers would experience extensive windfarm views for some 10kms. This will impact significantly on both long distance and day walkers. As can be seen in the Alliance Landscape Proof of Evidence²⁶⁰, Glyndwr's Way traverses the proposed Carnedd Wen, Llanbrynmair, Llanbadarn Fynydd and Llandinam windfarms and there is a real possibility that this important Trail could become unusable with each new windfarm built along its route. The importance of

²⁵⁵ ALL-S4-POE-04 Annex I Brandy House Farm

²⁵⁶ OBJ-313-British Horse -SOC-Llaithddu Mr P Moss

²⁵⁷ OBJ-521-0SOC-2-Long Distance Ride and Note supplied to the Inquiry giving names of regular users of Prince Llewellyn's Ride / Cross Wales Ride

²⁵⁸ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.13 BHS Windturbines Experiences Survey (2012) Additional Reference doc. C

²⁵⁹ FWL figures given in Note on Recreation FWL-C-011

²⁶⁰ ALL-SSAC-POE-04 Landscape, Glyndwr's Way overlay

Glyndwr's Way to accommodation providers and in promoting Mid Wales is evidenced in detail in Alliance documents²⁶¹.

10.37 Riders and walkers braving the tracks could no longer experience the sense of unspoilt 'wildness' and would lose a considerable area of glorious upland riding, particularly in conjunction with the proposed Llandinam site.

10.38 The construction period will mean long hours of noise and disruption for residents, riders and walkers for at least 17 months. None of the suggested mitigation measures will materially improve the situation and visitors will not return.

10.39 Given the high sensitivity of users on 'national level' trails and the degree of impact of proximate turbines, sub-stations and transmission line, the Alliance believes the magnitude of change will be high and that FWL have considerably underestimated the impact²⁶².

10.40 The Powys UDP policy E3 on Windpower states:

'Applications for windfarms will be approved where, inter alia, they do not unacceptably affect the enjoyment and safe use of highways and the PRoW network, especially bridleways.'

The proposal for Llaithddu so obviously impacts on both safety and enjoyment of these users that it is incomprehensible that it should pass this test. It is untenable that Countryside Services have withdrawn objection for a financial consideration of £72,000²⁶³.

10.41 The recent appeal decision at Pentre Tump²⁶⁴ cited proximity of turbines to Rights of Way and Bridleways as a major factor in dismissing the appeal. This was a small proposal with fewer PRoWs and bridleways than Llaithddu and no National Trail or Ride but the impact on visitors, tourism and local people was still considered too great.

Transport Route

10.42 FWL have identified a route from Newport Docks which, as the Alliance has shown²⁶⁵, has critical pinch points at Wyese Corner in Builth Wells and at Crossgates Bridge where no reliable assessment of capability has been carried out. For Crossgates Bridge, the Inquiry will have seen that different versions of the TMP are variable with interchanging photographs and legends leaving a very real doubt whether the (untitled) measurement survey carried

²⁶¹ ALL-S4-POE-04 §§ 3.8 – 3.18

²⁶² FWL SEI 2. § 10.1

²⁶³ FWL Note on Recreation FWL C -011

²⁶⁴ Appeal Decision: Land at Pentre Tump, New Radnor, Powys (2014) Inspector Nixon

²⁶⁵ ALL-TRANS-POE-S4-05 § 62 (critical assessment), §§ 65 - 67 (Cross Gates) § 68 (Builth)

out by a different team was of A483 or of A44 Crossgates Bridge. Some drawings even refer to both bridges on the same page. The Inspector may also wish to cross-check the grid reference given, which has a remarkable proximity to that for the A44 bridge in the material provided by Celt Power for Llandinam Repowering. The Alliance invites the Secretary of State to conclude that of the two measured surveys, the more recent measurements for Llandinam are more likely to be reliable.

- 10.43 This is important, firstly because FWL claim to be able to transport all their components without bridge or associated highway works. And secondly because the Inspector will note that despite referring to 80m towers elsewhere, the tallest, and widest, tapering tower tested was 75m²⁶⁶. At best it is 'tight' for 75m tower components, but the 80m components have not been tested. The Inspector or Secretary of State cannot be confident of FWL's claim that significant works are not required for delivering turbine components.
- 10.44 There is a requirement for 27 windfarm specific lay-bys on local roads. This considerable excavation will cause loss of biodiversity and visual integrity of the lanes as well as increased hard surface and loss of verges, banks and hedgerows²⁶⁷.
- 10.45 There will be up to 80 construction vehicles per day on these unsuitable local roads. These will also have to use the A483 from Newtown causing additional safety hazard on a road known locally to experience frequent accidents.

Effects on residents

- 10.46 There are 38 residential properties in the area of which 7 are less than 1 km from turbines. Some have pecuniary interest but others must be accorded proper protection from noise, possible EAM and associated health risks as drawn to the attention of the Inquiry in detailed evidence of Mr Weller and Dr Myhill²⁶⁸. This is backed up by oral and written evidence presented to this Inquiry from residents as far as 2 miles from the existing Carno 1 & 2 windfarms²⁶⁹.
- 10.47 Loss of visual amenity must also be assessed. FWL have failed to provide wireframes or photomontages for any proximate property so residents, the Alliance or the Inspector are unable to make any assessment as to magnitude or acceptability.

²⁶⁶ ALL-TRANS-POE-S4-05 § 62 (critical assessment), §§ 65 - 67 (Cross Gates) § 68 (Builth)

²⁶⁷ ALL-SSAC-POE-06 §§ 17, 30, 32, 62

²⁶⁸ ALL-S4-POE-07, ALL-NOISE-NOTE-S4

²⁶⁹ Properties 2 miles from Carno windfarm (e.g. Liz Barnes, Blaenglanhanog) and statement (oral and written) regarding sleep problems following the extension of Carno nearer to her home and retreat business (R. Shovelton Cumulative)

- 10.48 Residents, like visitors, enjoy the many local opportunities for walking and riding and will lose their cherished, unspoilt and tranquil landscapes. The entries in the Compendium are clear demonstration of that²⁷⁰.

Tourism and Economy

- 10.49 Walkers and riders are important all year round visitors for the Montgomeryshire economy and both recent surveys detailed in Alliance Proofs²⁷¹ and individual statements leave no doubt as to the reactions of many walkers and riders to windfarms. The special qualities of the astro-archaeology and sense of history that attracts visitors to the Brondre Fawr would be entirely lost. Construction and operation of Llaithddu would inevitably reduce visitors to the area.
- 10.50 A recent study commissioned by the WG²⁷² concluded that the magnitude of impact of windfarms in North Powys will be greater than elsewhere in Wales due to the type and interests of visitors. It was considered that there was a risk that replacement visitors would not materialise given the specific and limited tourism offer. This gives rise to serious concerns for lost income to tourism businesses and the viability of local facilities.
- 10.51 Evidence from operational windfarms²⁷³ and a study by Cardiff University and Business School into the impact of windfarms on rural Wales²⁷⁴ demonstrates that very few jobs will be created and a local construction supply chain is unlikely in a rural area. It is indicative of the inherent difficulties that FWL are unwilling to accept a condition with respect to local employment and training.
- 10.52 There is equally no evidence either from the study or communities near existing Mid Wales windfarms, that community benefits are an economic driver or have enhanced community life. As the Alliance has shown²⁷⁵, the opposite is rather the case.

Grid Connection

- 10.53 FWL have an agreed Grid connection and an indicative route to a Hub near Cefn Coch. The route takes a very sensitive path in terms of landscape, for example across the grain of the Hirddywel Ridge. Given the proximity of the Registered Historic Landscape of the Caersws Basin it would be difficult to

²⁷⁰ ALL-SSAC-POE-01

²⁷¹ e.g. The Mountaineering Council of Scotland survey encompassed long distance walkers and showed that some two thirds were already avoiding or intending to avoid walks with windfarms and that 68% thought turbines spoil the landscape. See ALL-SOCIOECO-REBUTTAL-S4-04 § 5.7 and Additional Reference B

²⁷² ALL-S4-POE-04-ADDENDUM whole document and quote at § 2.6

²⁷³ ALL-S4-POE-04 § 6.4

²⁷⁴ ALL-S4-POE-04 Munday et al (core document for tourism & economy) § 6.16

²⁷⁵ ALL-SSAC-POE-07

find a direct route or one acceptable in landscape terms and the Alliance would support Powys in their opposition to such a route.

- 10.54 The alternative is undergrounding to Bryn Dadlau substation at Llandinam and thence to Welshpool but there is no clarity on how the Welshpool connection could be achieved. There is insufficient present capacity at Welshpool substation to accept the full output from Llaithddu as well as Llandinam Repowering, should both be consented.
- 10.55 Uncertain energy export is a further example of the unsuitability of this proposal on the grounds of environmental, landscape, cultural heritage, ecology, transport and public amenity considerations.

Llandinam and Llandinam 132kV line

Section 11: Llandinam

Section 12: Llandinam 132kV line

Section 11: Llandinam (CPL)

Introduction

Turbines	Nameplate capacity	Annual output (@ 28% load factor) ²⁷⁶	Grid Connection	Contribution to 15% target ²⁷⁷
34	102MW	250,186 MWh	132kV: 90MVA connection offer	0.21%
Alliance Inquiry Documents ²⁷⁸				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

- 11.1. CeltPower Ltd (CPL) seek to decommission their existing windfarm at Penrhyddian & Llidiartywaun (known as P& L) comprising 102 wind turbines with plated output of 30.6MW (with a maximum 34MVA connection agreement) and to replace it with a new windfarm, initially for 42 turbines with a proposed plated output of 126MW.
- 11.2. Since then and following various consultation responses the scheme now before this Inquiry comprises 34 turbines (of up to 121.2 metres in overall height) with a proposed plated output of 102MW (with a maximum 90MVA connection agreement).
- 11.3. CPL is equity funded. The equity of the company is held equally by ScottishPower Renewable Energy Limited and Eurus Energy Limited²⁷⁹

²⁷⁶ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

²⁷⁷ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

²⁷⁸ As supplied to the Inspector, main parties, and the Inquiry library

²⁷⁹ CeltPower Limited Audited Accounts year ending 31 December 2013

EN-1 Contribution²⁸⁰

- 11.4. The installed (or 'nameplate') capacity of 102 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)²⁸¹.
- 11.5. Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.21%²⁸². And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03%²⁸³. CO₂ savings are assessed at about 0.08% of UK national emissions (on the basis of a grid average emissions factor)²⁸⁴.
- 11.6. This analysis is on the basis of the 102MW proposed: except for the security of supply figures, the figures for the net increment of 71.4MW nameplate capacity has not been calculated, but clearly would be less. Similarly, the figures do not reflect any further constraints down to 90MVA due to the constraints at Welshpool substation.
- 11.7. In a nutshell, that encapsulates the "contribution" from the CPL proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed).
- 11.8. This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 11.9. The balance which falls to be drawn along with that assessment of the 'contribution' needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Proposal

- 11.10. Whilst the current proposal is referred to as a re-powering of the existing windfarm, it is in fact a new windfarm application as with the others being heard within the Conjoined Inquiry. All the towers, all the turbines and all the infrastructure would be new plus 9.8 km of new access tracks.
- 11.11. The new wind farm will incorporate new turbine concrete platforms; new borrow pits, new tracks and the building of a new large sub-station.

²⁸⁰ EN-1 §4.1.3

²⁸¹ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

²⁸² Constable, ALL-SSAC-POE-03 p16 Table 6

²⁸³ Constable, ALL-SSAC-POE-03 p18 Table 7

²⁸⁴ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

- 11.12. The existing windfarm (P&L) commissioned on 1 December 1992 is proposed to be decommissioned due to its age and limited capacity. If any of the turbines failed to operate for six months under the terms of the then planning conditions then they would need to be removed.²⁸⁵
- 11.13. The site lies wholly outside the SSA C boundaries.
- 11.14. The CPL windfarm is part and parcel of a single project with the Llandinam line proposal which is part and parcel of the impacts of the windfarm (it could, after all, not deliver the small contribution to UK target without it). That, no doubt, is why the then DTI²⁸⁶ called for the LDM windfarm ES to include “*details of the proposed electricity Grid connection with likely impact and mitigation measures*” to be covered by it.²⁸⁷

Landscape

- 11.15. The proposed wind farm will be viewed from the Kerry Ridgeway, a promoted Regional Trail and acknowledged throughout this Inquiry as the equivalent of a National Trail due to its pre-historic landscape and its position commanding views to the west and north.
- 11.16. The proposed development also impacts on Glyndwr’s Way National Trail which passes through the area of proposed developments in Areas C and B and connects Knighton on the English Border, Machynlleth (site of Owain Glyndwr’s Parliament) and Welshpool.
- 11.17. The existing and proposed wind farm stand on the Llandinam plateau and ridge with the highest point at 535 metres (1,755 feet) looking both to the west and the north and will be seen both individually and cumulatively with other wind farm proposals in Areas C and B.
- 11.18. The proposed new windfarm is extended in the northern section 0.75 km further east and about 0.25 km further north. This has the effect of extending the ZTV into the Mochdre area, and as has been heard at the Inquiry, the residents of that area are concerned as to the effect. Despite many requests over the years for a photomontage to illustrate the effect, repeated at the Inquiry, no such request has been satisfied. Those concerns remain.

²⁸⁵ Montgomeryshire District Council planning permission 1991 condition 8 “*if any wind generator hereby permitted fails to produce electricity supplied to the local grid for a continuous period of six months then, unless otherwise agreed with the local planning authority, the said permitted structure and any ancillary equipment shall be dismantled down to ground level and removed from site and the land restored to permit agricultural grazing.*”

²⁸⁶ The then responsible authority and ultimate predecessor to DECC

²⁸⁷ Llandinam ES, Technical Appendix p2A-2 of 36

- 11.19. Despite the removal of turbines to reduce the effect upon the Caersws Basin Historic Landscape the effect at Caersws is, according to the 2013 SEI²⁸⁸, still significant as regards visual amenity, as was confirmed in questioning. This means that the vast majority of the Historic Basin will still be significantly affected as it is north of Caersws and covered by the ZTV.
- 11.20. The Alliance contends that the applicant has not accepted the significant change in the landscape characteristics due to the height of the proposed turbines at max 121.2 metres to blade tip (397 feet) as opposed to the existing turbines at 45.5 metres to tip (149 feet) – therefore the proposed 34 turbines at 121.2 metres to tip are in effect 266% higher – this is a major impact on the landscape both viewed at short, mid and long range.
- 11.21. The small number (6) of photomontages in the applicant’s April 2013 SEI does not present an accurate visual representation of the turbines and makes it difficult to gain the full appreciation of the landscape impact²⁸⁹.
- 11.22. The Alliance has produced as evidence to the Inquiry a photomontage from RWE’s Neuadd Goch ES viewed from Two Tumps²⁹⁰. The top page of this photomontage clearly shows the existing landscape with the current 102 turbines as all but indistinguishable in view. But, the second lower photomontage with the full range of potential turbines in planning demonstrates the massive negative impact on the view from Two Tumps and the impact on its setting and how it is appreciated on the landscape²⁹¹. This shows clearly the impact of the new proposed Celt Power turbines due to their height being over 2½ times higher than the existing turbines.
- 11.23. The response from the applicant’s landscape witness was that the existing turbines turned at a quicker speed and that the large new ones would turn slowly and with less of them so the impact in fact would be reduced.
- 11.24. The Alliance produced as evidence ALL-014²⁹². This table, with the mathematical calculations being accepted by the applicant, shows the swept area of the blades of the existing 102 turbines covering 17 acres and the swept area of the blades of the proposed 34 turbines covering 44 acres²⁹³ - an increase of 260% in swept areas resulting in massive visual impact be it short, medium and long range. So, not only over 2½ times higher, but with a generally similar proportionate increase in swept path.

²⁸⁸ Llandinam 2013 SEI NTS § 17

²⁸⁹ ALL-SSAC-POE-04 Alliance Proof of Evidence Session One Landscape - note 40

²⁹⁰ ALL-SSAC-POE-05-APP1 Cultural Heritage RWE Neuadd-Goch Bank ES Chapter 13 Two Tumps Figure 13 10A

²⁹¹ Two Tumps –pair of Bronze Age Round Barrows by the side of the Kerry Ridgeway

²⁹² Swept Areas of all five proposed windfarms and existing at Llandinam P&L and Cefn Croes (Ceredigion). Details cover no of turbines, maximum height, blade length, swept areas (sqm), hectares and acres

²⁹³ About 7 and 18 hectares, respectively

11.25. This is just one demonstration of the undeniable and demonstrated negative impacts in the landscape. As the careful evidence presented by the Alliance and its professional advisor shows, this proposal if consented, would very seriously damage the landscape and environment and would substantially outweigh the benefit of any contribution from the net additional 71.4 plated capacity but only 56MVA due to the constraints at Welshpool sub station²⁹⁴ The impacts would not, of course, be limited to the turbines: the CPI has heard and seen evidence relating to the impacts from the proposed 132kV line. Those impacts are just as much impacts of the windfarm as the line itself and further underline the wholly disproportionate adverse effects for such a modest contribution.

Transport

- 11.26. The proposal by CPL is to bring turbine equipment including blades from Newport docks by way of the M4, A470 and A483 to the site south of Dolfor. In Powys the route passes through Builth Wells, Crossgates and Llandrindod Wells. The route was covered in CPL's Supplementary Environmental Information (SEI) dated April 2013.
- 11.27. However the route for 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 and the draft Traffic Management Plan states the project will create over 89,000 additional traffic movements over the life of the project, possibly around 200+ HGV movements per day representing at its maximum an increase in HGV traffic from Newtown using the A483 identified at 22% (table 9.3.SEI 2011)
- 11.28. For the purpose of the ES and transport assessments CPL selected Siemens SWT 2.3MW turbines with 45m long blades on the premise that 3MW turbines of a similar size are available²⁹⁵ The proposed maximum loaded vehicle length of 49m and maximum height of 4.53m makes it impossible to pass through Builth Wells and pass under the Rail Bridge at Crossgates north of Llandrindod Wells without intervention.
- 11.29. CPL encountered difficulties with its trial run from Newport Docks in May 2010 on a route to bypass both Builth Wells and Llandrindod Wells. However the results of this run showed the route was not viable through the village of

²⁹⁴ The existing windfarm on the site already has a plated output of 30.6MW (with a 34MVA connection agreement.) The proposed new windfarm will only produce a maximum plated capacity of 102MW from the 34 wind turbines (with a maximum 90MVA connection agreement). Therefore it is clear that the new proposed windfarm would only provide a net extra plated capacity of 71.4MW but would only allow CPL to transmit an extra 56MVA greater than as at present

²⁹⁵ CPL are seeking consent to use turbines up to a given maximum height and rotor size with a maximum output of 3MW

Eardisley in Herefordshire. Consequently they now propose a route which will be entirely through Wales.

- 11.30. Under the Strategic Traffic Management Plan (STMP) it is proposed to build a Bailey Bridge 4 miles south of Builth Wells on the A470 over the River Wye to join the B4567 which leads to the A481 and then the A483 to avoid the bridge and tight turning angle in the centre of Builth Wells. The River Wye is a designated Special area of Conservation (SAC).
- 11.31. The Alliance strongly opposes this proposal and the environmental impacts it will have on the Wye but also the impact on the local community during the construction stage and when operational with traffic delays in and around Builth Wells. We understand that the proposal will require separate planning permission. It is unclear how long the Bailey Bridge would remain and what provision would be made if any large component parts needed replacement.
- 11.32. A further major concern is the proposal to lower the road under the Crossgates railway bridge on the A483. When questioned we found that the applicants wish to lower the middle of the road leaving pavements intact. This would result in permanent fixed traffic lights to allow only one way traffic and again this proposal is totally unacceptable with little regard to local people and other users of this main north south route. We find that no trials have been undertaken to assess the impact on the traffic from the north going south from the roundabout with the A44 where traffic will back up in peak periods up to and past the roundabout. The construction work itself would require an extended road closure and lengthy diversions over an extended period of time. This extends the impacts of the windfarm even further afield.
- 11.33. The Alliance position is that if the road under the Crossgates railway bridge is to be lowered it must be the whole area including pavements so that when works have been completed it will continue to allow 2-way traffic as at present.

Tourism and Economy²⁹⁶

- 11.34. The Alliance has provided detailed evidence to show that the tourist attraction is the unspoilt landscapes and tranquillity and the type and interests of the visitor. Well over 70% of tourists return many times demonstrating the accuracy of the Mid Wales Tourism Board tourist strap line: *'So good you won't want to leave'*. The area has some of the best walking, cycling and riding in Britain with Glyndwr's Way, Route 81 NCN, Prince Llewellyn's Ride and both the Cross Wales Walk and the Cross Wales Ride all passing proximate and having views of Llandinam Repowering.

²⁹⁶ ALL-S4-POE-04

- 11.35. Many repeat visitors have invested considerably in the local economy, purchasing holiday park homes and often visiting six or more times a year providing year round tourism and bringing some £9,000 a year per park home into the local economy. The Inquiry has heard from Holiday Park owners who have been unable to sell one home since these windfarm proposals became public.
- 11.36. Although such parks are carefully sited in sheltered valleys and nearer to local facilities, it is the entirety of the Montgomeryshire uplands that visitors enjoy and they tend to stay within the area. Many enjoy outdoor activities, walking, riding, bird watching, painting and fishing, all activates uniquely sensitive to the intrusion of massive, obtrusively turning vertical structures that for ever draw the eye creating a loss of the sense of peace and visual tranquillity.
- 11.37. Broneirion is a Grade 2 listed house set in landscaped acres. It accommodates 56 people and has conference facilities and a self-catering cottage. Llandinam Repowering will be a dominant feature as guests move around the locality. Businesses such as this provide good local employment opportunities and benefit local suppliers.
- 11.38. The Welsh Government Rural Select Committee considers tourism in real areas to be 'inordinately' important not only to businesses but also to the fabric and infrastructure of community life. Diversification into tourism supports many family farms.
- 11.39. CeltPower have not provided any comprehensive analysis of the Montgomeryshire tourism sector. The prominently situated new scheme will occupy a greater area of land than the Llandinam P&L windfarm as well as being some 2½ times higher and sweeping a much larger area of the sky. The present windfarm can be easily seen over a considerable distance and in many views but the turbines are relatively small. The new Repowering scheme along with the 35 km HDWL to Welshpool will dominate the skyline and be prominently visible as can be seen in photomontages.
- 11.40. Riders and walkers have for many years avoided the bridleways and footpaths that give access to the superb views from the ridge of the present Llandinam scheme. Equestrians in the BHS Survey actually refer to the Llandinam windfarm as a deterrent to their riding. Mr Alec White made a statement to the Inquiry regarding the impact of the scheme on the enjoyment and appreciation of Mid Wales by the 500 or so people who annually complete the Cross Wales Charity Walk.

Conclusion

- 11.41. Despite the obvious efforts to reduce the effect of the proposed development by removing nearly 20% of the proposed turbines, we are still left with the following damage:
- i) A much increased significance of visibility over a greater distance compared with the present scheme.
 - ii) 9.8 km of new track.²⁹⁷
 - iii) Eight new borrow pits.²⁹⁸
 - iv) New footprint for development infrastructure of 28.9 hectares.²⁹⁹
 - v) A completely new 132kv transmission line through 35km of outstanding historic landscape (see next Section).
 - vi) Increased visibility on Glyndwr's Way (e.g. major/moderate at Grach).³⁰⁰
 - vii) Major effect of local scale on Valley Mire.³⁰¹
 - viii) Six Scheduled monuments within the site, with intervisibility affected.³⁰²
 - ix) Moderate adverse significance from indirect visual impact on the Caersws Basin and Clywedog Valley Registered Historic Landscapes.³⁰³
 - x) Turbines on Access land, and Common Land requiring a Commons application.³⁰⁴
 - xi) Residents and visitors alike are disappointed that after having lost the amenity of this magnificent site for over 20 years they are threatened with losing it for another 25 years.³⁰⁵
- 11.42. The Alliance asks the Secretary of State to take into account the massive negative impacts on the landscape as a price that cannot be paid and that he refuses both this application and also the associated 132kV overhead electric line application.

²⁹⁷ Llandinam 2013 SEI NTS § 7

²⁹⁸ Llandinam 2013 SEI NTS section 4 § 2

²⁹⁹ Llandinam 2013 SEI NTS section 4 § 5

³⁰⁰ Llandinam 2013 SEI NTS section 4 § 13

³⁰¹ Llandinam 2013 SEI NTS section 8 § 3

³⁰² Llandinam 2013 SEI NTS section 10 § 2 & 6

³⁰³ Llandinam 2013 SEI NTS section 10 § 8

³⁰⁴ Llandinam 2013 SEI NTS section 13 § 4

³⁰⁵ OBJ-777

Section 12: Llandinam 132kV Line (SPM)

Introduction

380 prs of heavy duty HDWP poles	Plus 2 n^o 4-pole terminal structures	Supporting 192 n^o. 6 metre wide galvanised steel lattice gantry structures	Pole structure heights of up to 15.5m above ground level with a 4-wire circuit	Maximum line capacity 124MVA over its 35km length
Alliance Inquiry Documents ³⁰⁶				
ALL-SOC-OHL, ALL-OHL-POE-01 to -07, ALL-017 to -020 and all documents tabulated within sections 1 – 8 above				
As part of a Llandinam scheme of:				
Turbines	Nameplate capacity	Annual output (@ 28% load factor) ³⁰⁷	Grid Connection	Contribution to 15% target ³⁰⁸
34	102MW	250,186 MWh	132kV: 90MVA connection offer	0.21%

- 12.1. The proposal seeks to install a 4-wire heavy duty wood 132kV overhead power line (SPM line) to transmit a contracted maximum output of 90MVA from CeltPower Ltd's (CPL's) proposed 'repowering' windfarm scheme at Llandinam. This would be over a distance of 35 km from a new substation selected by CPL on a green field forming part of the proposed windfarm site (referred to as Bryn Dadlau substation), to the existing SP Manweb Welshpool substation which is proposed to be upgraded and expanded to accommodate the additional power.
- 12.2. The design of the power line comprises of heavy duty double wooden poles (HDWP) supporting 6 metre wide galvanised steel lattice gantry structures, 3 n^o AAAC 200mm² "POPLAR" phase conductors with a 124MVA summer

³⁰⁶ As supplied to the Inspector, main parties, and the Inquiry library

³⁰⁷ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

³⁰⁸ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

rating, plus an underslung AACSR/ACS 70mm² “HORSE” equivalent optical ground wire³⁰⁹.

- 12.3. The most recent revision of the proposed overhead power line comprises of 380 pairs of heavy duty pole supports with a maximum structure height of 15.5 metres above ground level, in addition to the 4-pole terminal structures at both ends of the overhead power line.
- 12.4. The Alliance has demonstrated very clearly that what may superficially appear to be a minor intrusion when considered as a line on a map at a ‘high level’ can result in marked and damaging impacts when scrutinised more carefully after more detailed assessment.
- 12.5. The impacts of the proposed overhead power line cannot be considered in isolation, because they are additional impacts of CeltPower Ltd’s Llandinam windfarm repowering project which was considered during Session 1 of this Inquiry. The woodland and ecology impacts of both the windfarm proposal and its grid connection proposal must be considered as two inclusive elements of one larger scheme.
- 12.6. This proposal is not just about the impacts of the poles and wires or about the loss of trees and vegetation and resulting impacts on wildlife, but is also about the cleared/pruned swathe through the landscape’s vegetation that will reinforce the visual presence of this temporary over-engineered proposal and thereby affect the public’s enjoyment and appreciation of its own landscape.
- 12.7. If the Line is approved it can only be because despite the severe impacts from both the Windfarm and the Line it must be accepted because of the benefits from the Windfarm. If the Line is to be used for different purposes, then those purposes must be tested against a presumption that the Line will be removed and the land reinstated, otherwise any future balance will be skewed against the protection of the valued environment and other important factors. It is for that reason that the Alliance set out the position at paragraph 8.1 of its Statement of Case³¹⁰.

EN-1 Contribution³¹¹

- 12.8. As shown in Sections 1 and 11 above, Dr Constable assesses the contribution from the parent windfarm to the electricity share of the UK 15% Target for 2010 as 0.21%³¹². And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03%³¹³. CO₂ savings are

³⁰⁹ SPM-ENGINEERING-SPOE-PAALMAN-OHL paras 3.9 to 3.11

³¹⁰ ALL/SOC/Session 3

³¹¹ EN-1 §4.1.3

³¹² Constable, ALL-SSAC-POE-03 p16 Table 6

³¹³ Constable, ALL-SSAC-POE-03 p18 Table 7

assessed at about 0.08% of UK national emissions (on the basis of a grid average emissions factor)³¹⁴. The associated impacts arising from the L Line need to be seen in that context.

- 12.9. But also in the context that Dr Constable's figures are 'gross' and do not net off the contribution from the existing turbines, and nor are they reduced to take account of the constraint to 90MW which results from constraints at Welshpool.
- 12.10. This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 12.11. The balance which falls to be drawn along with that assessment of the 'contribution' needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Approach

- 12.12. The SPM line is part and parcel of a single project and is as much an impact of the CPL windfarm as the windfarm is an impact 'released' by being able to connect to the Grid via the SPM line (it could, after all, not deliver the small contribution to UK target without it). That, no doubt, is why the then DTI³¹⁵ called for the CPL ES to include "*details of the proposed electricity Grid connection with likely impact and mitigation measures*" to be covered by it³¹⁶.
- 12.13. Early ES material from SPM did illustrate the SPM line together with the CPL windfarm³¹⁷. But that material was removed when replacement material was submitted³¹⁸. But despite taking account of the windfarm, that early ES material proceeded on the wrong basis. It proceeded on the basis that the windfarm was in place and part of the baseline landscape³¹⁹. The early ES material addressing Landscape and Visual also worked forward from an assessment within a baseline context which included not only the CPL proposal, but also VATT, FWL and Garreg Lwyd windfarms³²⁰.
- 12.14. SPM clearly approached the planning and design of route and infrastructure against an assumption that the area would already be (or would soon be)

³¹⁴ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

³¹⁵ The then responsible authority and ultimate predecessor to DECC.

³¹⁶ CPL ES, Technical Ax p2A-2 of 36

³¹⁷ See eg SPM line ES December 2009 – Viewpoints VP01 and VP02.

³¹⁸ tba

³¹⁹ See eg SPM line ES December 2009 - Viewpoints, p2 §8

³²⁰ See eg 2009 ES assessments of landscape and of visual effects at p57 §6.6.1 and p62 §6.6.104

desensitised not only by the CPL repowering, but by a number of other windfarm developments as well.

- 12.15. The first CPL ES itself carried over the then embryonic design parameters settled on by SPM as illustrated by its 'high level routing study'³²¹.

Limited toolkit and cost biased design choices

- 12.16. It is clear that SP Manweb PLC (SPM) only considered the use of the Heavy Duty Wooden Pole overhead power line option (which they have recently deployed in North Wales to connect an off shore wind farm to the grid at Abergele) and failed to give any determined consideration to the use of the less intrusive single pole variant of the Heavy Duty Wooden Pole or the New Trident design along the lower altitude sections of the route³²².
- 12.17. The option of undergrounding sections of the power line was not properly considered when selecting initial route options as the additional cost to underground was over-estimated and ruled out purely on a cost analysis basis³²³.

Flawed route corridor analysis and selection

- 12.18. Whilst SPM undertook a routing study to identify and evaluate options to connect CPL's chosen windfarm substation to the existing network, SPM chose not to publish this document and therefore denied others the opportunity to challenge their methodology³²⁴.
- 12.19. The conclusions offered in the resultant July 2008 Consultation Report are not convincing; and the reasons given for the rejection of the alternative routes are not justified with sufficient evidence³²⁵.
- 12.20. Many of the routes rejected at this stage could have been diverted in part, and/or partially undergrounded to mitigate environmental and amenity issues, particularly since the power line runs close to or parallel with public highways beneath which the cables could have been located to eliminate their visual and landscape impact. Further reports have shown that reasons for rejection of certain routes at this stage of the process have also been proven to be unfounded.
- 12.21. In choosing the southern part of route E, adverse landscape, cultural and visual impacts were ignored on the presumption that windfarms in SSA C

³²¹ See eg CPL 2008 ES p10 of Ch 4 §4.7.3

³²² ALL-NEED-POE-OHL-01 (Consultation Need and Design) §§1.3 to 1.5

³²³ ALL-NEED-POE-OHL-01 §1.6

³²⁴ ALL-NEED-POE-OHL-01 §§1.7 to 1.8

³²⁵ ALL-NEED-POE-OHL-01 §§ 1.9 to 1.15

would result in a windfarm landscape which would diminish the impact of the proposed overhead line³²⁶.

- 12.22. The Alliance therefore concludes that the 2008 route selection process was fundamentally flawed; in that it failed to properly consider all possible alternatives, dismissed significant environmental issues, and selected the option that was the easiest and cheapest route within which SPM could construct its preferred option of an overhead 132kV circuit. The iterative nature of design was curtailed from an early stage³²⁷.

Limited and selective public consultation

- 12.23. SPM failed to engage inclusively and adequately with the public during the pre-application stage of the project; and legitimate options to underground sections of the circuit where it would otherwise give rise to significant landscape, amenity, socio-economic, or visual impacts etc. were unreasonably dismissed. The conclusions presented by SPM regarding public consultation within the numerous ES documents should therefore be given little weight³²⁸.

Community response

- 12.24. It is clear from the local surveys carried out by numerous Community and Town Councils that the vast majority of local residents responding to those surveys see unacceptable impacts arising from the overhead power line proposal³²⁹.
- 12.25. The same widespread views are also apparent from the numerous objections forwarded to the inquiry; and was clearly demonstrated during the evening community sessions of the public inquiry held at Dolfor, Banwy, Kerry and Welshpool.

Unhelpful ES information and inadequate surveys

- 12.26. The photomontages do not utilise viewpoints where the true worst case scenario visual and landscape impacts of individual and groups of poles can be assessed, and even select locations where the line is obscured by vegetation and/or structures³³⁰. In many instances had these viewpoints been taken at different but nearby locations the impact of the proposal would have been demonstrated to be significantly greater.

³²⁶ ALL-NEED-POE-OHL-01, para 1.15

³²⁷ ALL-OHL-POE-01 p 2 section 1.

³²⁸ ALL-NEED-POE-OHL-01 §§2.1 to 2.11

³²⁹ ALL-COMMUNITY-POE-SSA-B-04, OBJ/416/002a, OBJ/606/002 and OBJ-629-C-SOC-APPA

³³⁰ AD/SPM/033 and AD/SPM/034

- 12.27. The July 2008 consultation document by SPM was also misleading as it showed a front cover image of an 11kV circuit crossing a field, not the proposed 132kV circuit³³¹. That would hardly invite anyone who was unaware of what a 132kV line would look like even to open it up, and the Alliance believes that many people may well still be unaware of the true appearance of the proposed line as there are no double wooden pole and steel lattice gantry HDWP overhead lines in the local area to draw comparison with.
- 12.28. The ES failed to identify the true extent of the impact of the proposal on individual mature trees (including veteran Oak and rare Black Poplar), ancient woodlands, tree groups and hedges which if removed would have a significant detrimental visual and landscape impact³³². It is the opinion of the Alliance that the impact of the proposal with respect to trees, species and habitats was not properly assessed before selecting the 100 metre wide route corridor. It is clear from the approach in the early ES material that SPM's 'mindset' was one where they were approaching route selection on the basis that they were expecting to provide a Line in an already degraded landscape.
- 12.29. The true visual and landscape impact of the selected support and 4-wire proposals were identified during the Public Inquiry by the Alliance during accompanied site visits and actual photographs of the same type of design constructed near Abergele³³³.

Woodlands and Ecology

- 12.30. Inaccurate tree surveys were noted by the Alliance³³⁴. SPM stated in the 2009 ES that approximately 300 trees would need to be felled but the true figure is nearer four times that: closer examination of material only summarised in the ES shows that a figure closer to 1,200 trees would be lost³³⁵. These include a rare mature Black Poplar and a 400 year old oak³³⁶ which would need considerable 'micrositing' if they are to be avoided, but with unassessed knock on effects.
- 12.31. The Alliance questioned the number of ancient woodlands of high nature conservation value affected by this proposal³³⁷ using the Ancient Woodland Inventory in Wales.

³³¹ 2009 ES Appendices, page 28

³³² ALL-OHL-POE-04

³³³ OBJ-415-LAND-POE-OHL

³³⁴ ALL-OHL-POE-043 § 35 §§

³³⁵ ALL-OHL-POE-04– paragraph 5, p3

³³⁶ ALL-OHL-POE-04 §§ 20, 22

³³⁷ ALL-OHL-POE-04, para 14, p5

- 12.32. Cutting a swathe through a rare shelter belt of mature Beech near Two Tumps will result in significant visual impact and will cause wind tunnel effect thereby threatening the life of remaining trees (see the oral evidence of John Campion given at the CPI Session).
- 12.33. Inadequate wildlife surveys have been taken to demonstrate that the proposal will not have an unacceptable detrimental effect on dormice³³⁸. NRW's evidence states that SPM's level of survey effort does not comply with best practice guidance³³⁹. The Alliance supports their opinion.
- 12.34. SPM's bat survey evidence demonstrates that the substantial number of 953 potential bat roost trees would be felled if the SPM line is approved³⁴⁰. The Alliance agrees with NRW's bat expert's concerns that SPM have shown insufficient survey effort regarding bat foraging and roost affects for bats. Best practice has not been followed³⁴¹.
- 12.35. Removal of 96 hedgerow sections and reduction in height to 1.5 to 2 metres will have significant impact on a variety of species, in particular bats³⁴². Hedgerows are used as safe corridors for travel or feeding, and are needed for connectivity³⁴³. The hedgerow removal will also have substantial negative impact on landscape character.
- 12.36. Curlew have a high degree of breeding site fidelity and have been recorded along the line route. Disturbance will considerably reduce the likelihood of them breeding at these previously used sites.

Inadequate mitigation measures

- 12.37. SPM suggest that the proposal to remove approximately 1,200 trees to construct the proposed overhead line can be mitigated by 2 for 1 tree planting and additional hedge planting³⁴⁴. However, the positive landscape (and wildlife) contribution of existing mature trees, or groups of trees retained as landscape features or wind breaks cannot be replicated by replacement planting of twice as many immature specimens at alternative locations; particularly in instances where the proposal will require the removal of veteran trees and ancient woodland.

³³⁸ ALL-OHL-POE-04 § 52

³³⁹ CON-003-ECOLOGY-POE-DAVIES_OHL, 4.1.2, p5

³⁴⁰ ALL-OHL-POE-04 § 53

³⁴¹ NRW (Paola Reason), 2.1.4 , p2

³⁴² ALL-OHL-POE-04 § 47

³⁴³ ALL-OHL-POE-04 § 51

³⁴⁴ SEI 2013

- 12.38. The Alliance presented a statement from a horticultural expert and the proprietor of Dingle Nurseries, Mr Andrew Joseph, which demonstrated that SPM's suggested mitigation is totally unsuitable and unacceptable³⁴⁵.
- 12.39. It is also the case that SPM do not have the consent of many of the affected landowners to plant alternatively located trees near to those which would have to be removed; therefore the alternative planting cannot be guaranteed.

Over engineered design and failure to provide strategic grid connection solution

- 12.40. As noted above, SPM approached early assessment on the premise that the area would be degraded by multiple W/Fs. An Overhead DWP design was selected, but with a number of intermediate single poles³⁴⁶. In October 2012, and in recognition of views about the design, SPM circulated a briefing note designed to dissuade PCC Council Members from objecting³⁴⁷. It offered a 'Trident' design. It highlighted the absence of high-level metalwork brackets, it referred to fewer poles being required, how the poles could be sited closer to hedgerows and gave the very clear impression that single poles could be used throughout. The Alliance doubts that such a briefing note would even have been considered, let alone published if SPM was not confident that it could be delivered. The note itself said that this design "could be implemented".
- 12.41. All sorts of reasons why it should not now be provided are now set out by SPM. But the SoS should exercise caution over the claims which are now made.
- 12.42. A full critique of the over-designed nature of the proposed power line is given in the Alliance Construction Design and Need document³⁴⁸. It repays careful reading. Note, in particular, that SPM have now increased the number of double poles compared with earlier proposals³⁴⁹.
- 12.43. By submitting a separate grid connection proposal for the CPL Llandinam windfarm in advance of consideration of the Mid Wales Connection Project, SPM have failed to bring forward an application which might be capable of being a more sustainable and strategic power export solution for any of the windfarms within or close to SSAC which might be approved (after testing impacts).

³⁴⁵ ALL-020

³⁴⁶ ALL OHL-POE-01 p20 §4.14.

³⁴⁷ ALL-OHL-POE-01A² 7.

³⁴⁸ ALL-NEED-POE-OHL-01

³⁴⁹ See eg ALL-OHL-POE-01 p20 §§4.12.- 4.15.

- 12.44. The theoretical grid connections review by Mott MacDonald³⁵⁰, and the theoretical 160MW single line option promoted by PCC³⁵¹ served by a 176MVA HDWP overhead line to serve the Llandinam and Llaithddu windfarms, both reinforce the argument by the Alliance that a separate Llandinam to Welshpool SPM line should not be consented without first working up a potential strategic grid connection solution which offered different permutations for approvals depending on how many (and which) windfarms in the area are approved so as to avoid ad hoc uncoordinated increments.
- 12.45. None of these theoretical alternative connection strategies can be approved as part of this conjoined public inquiry process, because these alternatives have not been through a formal consultation process; Environmental Statements have yet to be prepared and Strategic Environmental Assessments have not been carried out. However, the exercise to identify possible alternative grid connections has demonstrated that the grid connection proposal before the Inquiry certainly has very substantial impacts which are also the impacts associated with the windfarm itself, and the inappropriate Bryn Dadlau substation location.
- 12.46. During the Inquiry process, it has been demonstrated by SPM³⁵² that it would not be viable to utilise the larger 300mm² “UPAS” conductors with their 176MVA summer rating instead of the proposed 200mm² “POPLAR” conductors with their 124MVA summer rating on the proposed Llandinam to Welshpool circuit, as this would require additional transformer equipment to be constructed at the Llandinam, Welshpool and Oswestry substations (which may perhaps require the purchase of additional land by SPM to accommodate the additional substation components); and a completely new 132kV circuit to be constructed from Welshpool to Oswestry to accommodate larger conductors. Any new circuit between Welshpool and Oswestry would have to be constructed alongside the two existing 132kV circuits to maintain power supply to Welshpool and Newtown substations.
- 12.47. These same documents by SPM also identified that the existing pole schedule and design for the proposed Llandinam to Welshpool circuit would have to be completely redesigned with larger diameter poles, closer pole spacings at different locations along the route corridor, at least a 5% increase in pole numbers, and quite possibly higher poles to achieve a HDWP design capable of accommodating the larger “UPAS” conductors. This redesign would require a revised ES to be prepared and submitted as the impacts of the proposal would be different.

³⁵⁰ Grid Connections Options Review, Mott MacDonald (this document has five Inquiry references: SEI/CUMULATIVE/GRID/2, AD/VATT/021, AD/FWLC/052, AD/RES/040 and AD/RWE/031)

³⁵¹ OBJ-002-SOC-S4

³⁵² SPM-NETWORK-POE-BEDDOES-APP10-OHL Paras 1.10 to 1.18, SPM-014 and SPM-028

- 12.48. The possibility that the route corridor may have to be modified to accommodate “UPAS” conductors on a revised HWDP design cannot be ruled out; in which case the current proposal may have to be withdrawn and a new proposal submitted to the National Infrastructure Planning Inspectorate.
- 12.49. SPM have confirmed³⁵³ that a remote earthing station could feasibly and technically be constructed at some point along the proposed route near to the Bryn Dadlau substation to address the Rise of Earth Potential issue relating to the poor choice of site for the Bryn Dadlau substation. This would permit the less intrusive 3-wire single pole version of the “New Trident” support (as approved for use on the Oswestry to Wrexham additional “Legacy” circuit) to be used at least along two thirds of the length of the circuit below an altitude of 250 metres from Welshpool substation to Cefn-Gwyn woods (just below the Kerry Ridgeway near pole number 230).
- 12.50. Powys County Council have suggested that the time delay to design a remote earthing station is not justifiable because of the urgency of need³⁵⁴, but have failed to acknowledge that a similar delay would be required to redesign the existing circuit proposal to accommodate the larger “UPAS” conductors. But, as Dr Constable has shown, the level of need and its urgency in the context of the UK’s 2020 Target is now very much reduced³⁵⁵. It would, in any case, send entirely the wrong message if the ESI sector could bring forward poor designs and then hold local people and even the SoS ‘over a barrel’ just because the ESI failed to come forward with an acceptable solution in the first place.
- 12.51. The failure of CPL and SPM to work together at the formative or any progressive design refinement stages to identify and select a site for the CeltPower windfarm substation where rise of earth potential does not result in the need for a separate earth wire to be accommodated on the overhead power line, has resulted in the heavy duty wooden pole 4-wire design instead of the simpler and less intrusive new Trident design. The ‘Griffiths letter’³⁵⁶ of July 2011 clearly indicates that any new connection from a windfarm substation to the distribution network should be achieved by a standard 3-wire system on wooden poles or by underground lines.
- 12.52. SPM’s written assurances to Powys County Council in the October 2012 “Briefing Note 2” that if the proposal was supported by the Council, SPM

³⁵³ SPM/029

³⁵⁴ OBJ-002-015

³⁵⁵ ALL-CLO-POE-01 Dr Constable Planning Balance Proof

³⁵⁶ CD/CON/003/PLA/009

would redesign the overhead line using the single pole “New Trident” system³⁵⁷ would be consistent with the ‘Griffiths expectation’.

- 12.53. SPM have given a preferential advantage to CPL by agreeing to provide them with an early connection to the existing local distribution network, when all other windfarm developers have been made to wait for the Mid Wales Connection project³⁵⁸.
- 12.54. The overhead line is over engineered and unnecessarily intrusive to accommodate the output from the proposed Llandinam windfarm.
- 12.55. Unlike 132kV circuits which are part of the LAN and provide a security of supply and address the needs of all consumers within the electricity network area (e.g. the recently approved 132kV Legacy reinforcement circuit); it must be recognised that this separate 132kV overhead power line will do nothing to reinforce the local electricity network (contrary to the then WAG expectations described in Section 8 above). Nor will it improve the security of supply to local businesses or residences currently served by the Oswestry , Welshpool and Newtown substations, As promoted, it will be decommissioned when the CPL windfarm ceases to generate electricity or within 25 years. The environmental impacts of this overhead 132kV electricity circuit must therefore be considered as part of the overall impact of the proposed CPL windfarm proposal. It has been promoted for no other purpose or collateral benefit.
- 12.56. The existing 102 turbine windfarm on the site already has a plated output of 30.6MW (with a maximum 34MVA connection agreement). It has no finite decommissioning date imposed by the existing consents (any turbine which is inactive for 6 months must be removed) The proposed new replacement windfarm and this over-engineered overhead 132kV power line will only produce a capacity for a maximum 102MW from the 34 wind turbines now proposed (with a maximum 90MVA connection agreement). It is therefore clear that the proposal would only provide a net extra plated generating capacity of 71.4MW; and the proposed new circuit would only permit CPL to transmit only 56MVA greater than at present. The negative environmental and socio-economic impacts of the windfarm and its dedicated heavy duty overhead power line must therefore be considered against these rather smaller net increases than otherwise are apparent. Nevertheless, this increased total level of transmission would still require the output from the windfarm to be constrained due to the inadequate capacity of the local grid network at Welshpool substation and the transmission circuits to the north of Welshpool³⁵⁹.

³⁵⁷ ALL-NEED-POE-OHL-01 Appendix 7

³⁵⁸ ALL-NEED-POE-OHL-01 §§ 3.2 to 3.4

³⁵⁹ SPM-NETWORK-POE-BEDDOES-OHL

Construction

- 12.57. The full critique of the construction methodology is given in the Alliance Construction and Traffic document³⁶⁰.
- 12.58. It has been established that there are significant sections of the upper part of the route between Hodley and the A483 that will prove to be very difficult to access by construction traffic due to the physical constraints, geometry and topography of the minor public highway and public right of way networks identified to accommodate the construction and delivery traffic.
- 12.59. Upon cross examination of SPM's witnesses Alan Davies (Development Transport Planning Consultancy) and Richard Livingston (Amey plc) it was established that the construction methodology has been based on desk studies, drive-by and long distance visual assessments; and that no approach has been made to the local highway authority to identify problem areas or engineering solutions which could prove to be very costly, result in negative environmental and landscape impacts; and be disruptive to normal traffic movements and local residents. It is likely that significant engineering operations would be required to secure appropriate access tracks to construct the upper section of the line between Hodley and the A483.
- 12.60. The size of the vehicle that would be used by Amey plc to transport the HDWP poles to their final locations has since been clarified by SPM³⁶¹, which confirms that the movement of the taller poles will necessitate escort vehicles because of the forward or rear load overhang. This would add yet further inconvenience and delay and even encourage 'alternative routeing' ('rat-running') on less suitable roads for those familiar with the area - or not.

Landscape and Visual

- 12.61. The Alliance has presented to the inquiry a photograph of an overhead line near Abergele³⁶² of exactly the same design as that proposed for the SPM line. This demonstrates the significant negative effect that such a line can have upon a landscape similar to that experienced in Mid Wales.
- 12.62. The very intrusive metal framework on the top of the poles, and the double pole arrangement with its metal cross bracing ensure that the eye is led along the line and the arrangement does not therefore integrate at all well with the landscape.

³⁶⁰ ALL-CONSTRUCTION-POE-OHL-05

³⁶¹ SPM/021

³⁶² OBJ-415-LAND-POE-OHL

- 12.63. Twenty one photographs³⁶³ illustrating the landscape through which the line would pass have been presented at the Inquiry and these show that the countryside is not desensitised at present and the proposed line would have a considerable effect upon the varied topography that is much valued by the local population and visitors.
- 12.64. Six of the photographs were augmented by a photomontage of the line and these examples illustrate the difficulties that are inherent in trying to assimilate the proposed SPM line into this Mid Wales landscape.
- i) Location `A` Leighton Churchyard: The line will be very visible in the Severn valley and detract from the characteristic avenue of trees.
 - ii) Location `F` Near Woodlands: The view across the Camlad valley to Hendomen and Montgomery will be significantly affected with its important landscape and historical features of Montgomery, Civil War battle site and numerous castles sites.
 - iii) Location `J` Llandyssil valley: This area is severely compromised as the photomontage shows with the line crossing the grain of the valley and also skylining from the top of the ridge adjacent to Henfron Moated site (SAM MG 220) across the Goron-ddu hill.
 - iv) Location `K` Cefn y Coed Hills: This area is seriously affected with the double pole line standing out starkly against the very attractive landscape and far reaching views.

The lane is particularly valued by walkers and is a local promoted cycle route.
 - v) Location `M` Cefn y Coed ridge at Froenheulog: The line very seriously affects the much loved escarpment which is viewed from a large area. In addition, going south, the line skylines along the hill to Glanmule.
 - vi) Location `O` Cae-Betin on a footpath linking Kerry with the Ridgeway: The view towards Black Gate shows how seriously the source of the Mule and its infant stream valley would be compromised by the line. This area will also be viewed from the Kerry Ridgeway promoted Regional Trail and the Alliance submitted evidence³⁶⁴ to show that the majority of the Trail from Block Wood car park to the Two Tumps will be affected. The Inquiry heard that this Trail is considered to be equivalent to a National Trail. A further aerial photograph³⁶⁵ was provided as evidence to show that this infant Mule area is very worthy of protection from such a proposed overhead line.

³⁶³ OBJ-415-LAND-POE-OHL

³⁶⁴ OBJ/415/LAND/POE/APP9 a-h/OHL

³⁶⁵ ALL-018

- 12.65. The Alliance considers that the proposed Llandinam Repowering Wind Farm scheme is unacceptable in landscape and visual terms. The landscape and visual impacts of the Llandinam Link would be sequential and additive to the impacts of the Llandinam Repowering Wind Farm scheme, and together these proposals are considered to be unacceptable in their own right.³⁶⁶
- 12.66. We consider that the applicant's ES has underestimated the significance of the landscape and visual impact of the proposed Llandinam Link on the highly sensitive landscape in the vicinity of the Glog and Kerry Hill: and that the scheme would have major adverse effects, both individually and cumulatively with applications for proposed windfarms in SSA C, on the character of a landscape that is assessed as being of high landscape value and also on users of local rights of way³⁶⁷.

Residential Visual Amenity

- 12.67. The Alliance has drawn four locations to the attention of the Inquiry where residential amenity is particularly affected. In three cases, Rhydwhyman Crossing Cottage, Upper Maenllwyd and Cilthriew, these coincide with listed buildings and the significance upon the setting is rated as large/very large in the 2013 SEI³⁶⁸. We appreciate that there is some difference in the methodology for assessing settings and visual amenity but the rating is certainly indicative of the amenity loss the inhabitants would have to endure.
- 12.68. The other location is at the entrance to Edderton Hall where a line of residences will suffer the line particularly prominently in close views from their windows and rear gardens. The Inspector was able to sample the aspect from one of the residences.

Tourism

- 12.69. Most visitors come from within two hours of their home and the countryside and wildlife is what brings them³⁶⁹. The local landscape is actively enjoyed by residents and visitors alike via lanes, roads and public footpaths.
- 12.70. Landscape impact is not merely an aesthetic consideration. There are potential economic implications of the proposed windfarm developments that will be exacerbated by the inevitable proliferation of transmission infrastructure. The lovely, varied and panoramic landscapes unmarred by incongruous industrial structures are a prime visitor attraction. The SPM line represents a particularly unsightly construction traversing 35kms of predominantly unspoilt country through areas of high and outstanding cultural

³⁶⁶ ALL-OHL-POE-02 Landscape § 18

³⁶⁷ ALL-OHL-POE-02 Landscape § 16

³⁶⁸ tba

³⁶⁹ ALL-OHL-POE-04, page 59

heritage importance. Detraction from the perceptions and appreciation of the many visitors to the area is inevitable.

- 12.71. There are several static and touring caravan sites, pubs, restaurants, country hotels and other accommodation providers in the vicinity of the Line. The two closest caravan parks, Goetre and Fron Fraith, will be particularly affected by views of the Line but were ignored by SPEN in their impact analysis as shown in cross examination by the Alliance. Both are substantial, long established businesses and Fron Fraith also offers luxury standard self-catering apartments and a fishing lake and promotes local walks in the Cefn y Coed hills where the Line will skyline obtrusively³⁷⁰.
- 12.72. Montgomery is a popular town dependent on visitors and marketed as 'the town that time forgot' with many historic associations including Rhydwyman Ford, Montgomery and Hendomen castles, Battle of Montgomery and Offa's Dyke³⁷¹. There will be intrusive, if sometimes distant, views of the SPM line in the area of all these historic sites.
- 12.73. As the Regeneris Tourism report has identified, in north Powys the requirement for new transmission infrastructure is an additional risk factor for tourism³⁷². This may 'only' be one double pole line but the standard, heavy duty design will be highly obtrusive in unspoilt upland areas such as the Kerry and Cefn y Coed hills. There will be extensive views of the Line from sections of the promoted Kerry Ridgeway regional trail. Should part of the Line be undergrounded this will result in incongruous views of a substantial sealing end compound at the head of the Mule.
- 12.74. In the event of Llanbadarn Fynydd windfarm also being consented, Vattenfall propose a second parallel Heavy Duty line following much the same route. The visual damage in such an area would be entirely unacceptable.
- 12.75. SPEN are clear in evidence³⁷³ that the Line will not produce economic benefit beyond a few temporary construction period jobs and these may not even be local. There would be no economic gain here to counteract losses in the tourism sector resulting from the Mid Wales proposals. Installation of the Line would add to the amount of additional construction traffic for the windfarms and deter visitors from coming into or through Montgomeryshire, a further risk factor for tourism identified by the Regeneris report³⁷⁴.

³⁷⁰ OBJ-415-LAND-POE-OHL

³⁷¹ ALL-SOCIOECO-POE-S4-04

³⁷² ALL-SOCIOECO-POE-S4-04-ADDENDUM

³⁷³ VATT/SOCIOECO/POE/BELL/S4

³⁷⁴ ALL-SOCIOECO-POE-S4-04-ADDENDUM

Cultural Heritage

12.76. The Alliance has given evidence³⁷⁵ demonstrating that the SPM line has a serious effect throughout its length upon landscapes, as well as individual assets, that are rated at the highest level of historic value³⁷⁶.

Landmap classification

12.77. Analysis of the Landmap overall classifications for Historic Landscape Aspects show that the line passes through 'Outstanding' rating for some 70% of its length and 'High' for 27%³⁷⁷.

12.78. The majority of the area rated as 'High' in the Historic Landscape Aspect is, however, rated as 'Outstanding' in the Landmap Cultural Heritage Aspect rating and is part of the Vale of Montgomery Registered Historic Landscape which again is rated as 'Outstanding'³⁷⁸.

12.79. Thus the SPM line is almost entirely situated in landscapes which have official recognition as being of the highest possible rating as regards Historic and Cultural Heritage aspects³⁷⁹.

12.80. It is important also to note that in those Historic Aspect areas with overall 'Outstanding' rating there are many other Landmap historic criteria that are also 'Outstanding'. These are as follows³⁸⁰

- i) Lower Severn Valley - Outstanding rarity, potential and survival criteria.
- ii) Cefn-y-Coed (Caerhowel to Upper Maenllwyd) – Outstanding rarity, potential and survival criteria.
- iii) Upper Mule (Upper Maenllwyd to near Kerry Hill) - Outstanding potential and rarity criteria. In the justification it says that the area is of exceptional interest.
- iv) Kerry Hills (Near Kerry Hill to near Bryn Dadlau) - Outstanding potential and rarity criteria.

12.81. In the Vale of Montgomery Registered Historic Landscape the Cultural Heritage Outstanding overall criteria is backed up by an 'Outstanding' criterion for group value because *'The range of defensive/aggressive works present in the landscape span several millennia, thus contributing to this evaluation of group value.'*³⁸¹

³⁷⁵ ALL-OHL-POE-03

³⁷⁶ ALL-OHL-POE-03

³⁷⁷ ALL-OHL-POE-03 p3 § 4

³⁷⁸ ALL-OHL-POE-03 p 3&4 § 5

³⁷⁹ ALL-OHL-POE-03 p 4 § 7

³⁸⁰ ALL-OHL-POE-03 p 1,2 & 3 § 3 a-g

³⁸¹ ALL-OHL-POE-03 p 4 § 5

12.82. All the above ratings throughout the SPM line's length signify that it is not a suitable corridor for such an installation and the following brief summary from our evidence of effects on particular historic assets adds greater weight.

Effects on particular assets

12.83. As the Updated ES produced by SPM points out the proposed line produces significant effects upon 28 Scheduled Ancient Monuments, 35 listed buildings, 1 Registered Park and Garden, 3 Conservation Areas and the Vale of Montgomery Registered Historic Landscape³⁸².

12.84. Taking a journey along the line from Welshpool to Bryn Dadlau the significant effects include upon the following assets:

12.85. Leighton Hall and Park area

- i) The Hall which is Grade 1 listed sits in an Historic Park and Garden which is also of the highest rating on the CADW Register. The park also contains a tower of Grade 1 listing and three bridges of Grade 2* rating. The entire area is a Conservation Area.
- ii) Adjacent to this Park is another Conservation Area which is the Leighton Centre model farm consisting of 16 Grade 2* buildings.³⁸³
- iii) Leighton Holy Trinity church which is grade 2* and Offa's Dyke which is a Scheduled Ancient Monument of international importance are also in this area.

The Updated ES shows that all these assets - of the highest importance - all experience significant effects of differing magnitudes³⁸⁴.

12.86. Vale of Montgomery Registered Historic Landscape

- i) The proposed SPM line passes through the area of the Historic Landscape which has the largest concentration of historic assets that give the area its 'Outstanding' group value in the Landmap Cultural Heritage rating.³⁸⁵
- ii) The significance of effects upon the three forts (all SAMs) of Forden Gaer (Roman), Ffridd Faldwyn (Iron Age) and Hen Domen (Mediaeval) are all rated as large/very large by SP Manweb. In addition the line passes through the gap between Hen Domen fort and Rhydwhyman Ford on the Severn. This Ford was an important meeting place where the English King and the Welsh Prince signed the Treaty of Montgomery.

³⁸² ALL-OHL-POE-03 p 4 § 8

³⁸³ ALL-OHL-POE-03 p 5 § 10 a, b, c & d

³⁸⁴ ALL-OHL-POE-03 p 5 § 10 e, f & g

³⁸⁵ ALL-OHL-POE-03 p 6 § 11a & p 3 & 4 § 5

The fort was built to guard this crossing and therefore it is important the relationship is not ruined by the overhead line.³⁸⁶

12.87. **Caerhowel to Kerry Domestic focus**

- i) This area comprises the Cefn-y-Coed and Upper Mule Landmap Historic Aspect areas which are both rated as 'Outstanding'. The Landmap descriptions show that they are important for the continuum of settlement from prehistoric to recent times. Assets that are affected therefore span the timescale from the Henfron Moated site era to the Victorian Sawmill Conservation area. The Updated ES shows that six assets experience Large / Very Large significant effects and six Moderate/ Large significant effects. These SAMs and listed buildings are summarised in our proof³⁸⁷.

12.88. **Kerry Hills Prehistoric Landscape**

- i) The description in the Landmap Historic Aspect is of this area being a '*prehistoric landscape*'. Many SAMs are present and expert opinion considers intervisibility between some of the barrows, stone circles and other funerary relics was important for ritual reasons. The bare landforms in this area assist in appreciation of interlinking but equally ensure that the proposed line would have a major effect on settings and views to and from these nationally important SAMs. According to the Updated ES four SAMs would experience a significance of large/very large and five a significance of Moderate/Large³⁸⁸.
- ii) As demonstrated in the landscape section, the Kerry Ridgeway is significantly affected by the proposed line between Cae Betin via the Two Tumps to Cider House Farm. It is important to realise that the Ridgeway carries what is reputed to be the oldest road in Wales and possibly dates back to the Iron Age³⁸⁹.

Conclusion

12.89. In conclusion it is impossible for the Alliance to understand how the routing of a line through what is officially recognised as being 'Outstanding' historic landscape throughout can be contemplated. The significant effects upon particular very important assets obviously reinforce that view.

12.90. As illustrated through analysing just four of the groupings it is difficult to conceive how an overhead line which is a direct result of the Llandinam

³⁸⁶ ALL-OHL-POE-03 p 6, 7 & 8, §§ 11 c, d, e & f

³⁸⁷ ALL-OHL-POE-03 p 9

³⁸⁸ ALL-OHL-POE-03 p10 § 13 a & b

³⁸⁹ ALL-OHL-POE-03 p11 §13 f

windfarm could be located more disastrously for cutting a swathe through such an OUTSTANDING historic canvas.

“SSA B sites”

Section 13: Llanbrynmair

Section 14: Carnedd Wen

Section 13: Llanbrynmair (RES)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30.0% load factor)³⁹⁰	Grid Connection	Contribution to 15% target³⁹¹
30	90 MW	236,520 MWh	None included	0.2%
Alliance Inquiry Documents³⁹²				
ALL-SOC-SSA-B, ALL-SSAB-POE-01 to -07, ALL-014 to -016 and all documents tabulated within sections 1 – 8 above				

- 13.1 The Llanbrynmair proposed site covers some 1,700Ha and is situated on an extensive plateau known as Llanbrynmair Moors. The RES proposal comprises 30 turbines, 126.5m to blade tip, the site extends from the source of the Afon Gam in the south to Nant Ffridd y Castell in the north, where the proposed turbines will clash visually with those of a greater size proposed for Carnedd Wen. Associated infrastructure includes 27.7 km of access tracks as well and modifications to approximately 18km of existing highways, crane pads, 6 construction compounds, cable circuits and electricity substation, seven borrow pits and 2 control buildings.

EN-1 Contribution³⁹³

- 13.2 The installed (or ‘nameplate’) capacity of 90 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)³⁹⁴.

³⁹⁰ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable’s evidence) on the basis of the parameters described

³⁹¹ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable’s evidence) on the basis of the parameters described

³⁹² As supplied to the Inspector, main parties, and the Inquiry library

³⁹³ EN-1 §4.1.3

³⁹⁴ Constable, ALL-SSAB-POE-02 p13 §16, p19 §44 *et seq*

- 13.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.2%³⁹⁵. And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03%³⁹⁶. CO2 savings are assessed at about 0.07% of UK national emissions (on the basis of a grid average emissions factor)³⁹⁷.
- 13.4 In a nutshell, that encapsulates the “contribution” from the RES proposals (before any transmission losses along the Grid or CO2 costs from Grid infrastructure is addressed)
- 13.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 13.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Habitat and Hydrology

- 13.7 Llanbrynmair Moors were identified in both the Hobhouse report in 1947, and by RSPB as early as the 1960s when they asked NCC to designate the site, as being of exceptionally high quality for landscape and biodiversity. More than 1,000Ha of the application proposal comprise active blanket bog and species rich acid grassland. RES acknowledge that some of this will certainly be destroyed completely³⁹⁸.
- 13.8 Both NRW and PCC agree that much of the blanket bog is of high quality, contrary to the downgrading offered by RES; much of the blanket bog is National Vegetation Classification (NVC) M19, which is of international importance. More than 1,000Ha comprise active blanket bog and along with the area under consideration for development by RWE this is well in excess of 2,000Ha (5,000 acres) of blanket bog. The mitigation offered by RES does not detract from TAN 6 advice and Planning Policy Wales³⁹⁹, which states the need to ‘*promote the functions and benefits of soils, and in particular their function as a carbon store*’. The impact of this loss of peat is disguised in the assertion that proposed mitigation and peat restoration will work within the lifetime of the management plan. This Inquiry has received evidence from the Alliance demonstrating that this is a completely unrealistic timespan without

³⁹⁵ Constable, ALL-SSAB-POE-02 p18 Table 6

³⁹⁶ Constable, ALL-SSAB-POE-02 p20 Table 7

³⁹⁷ Constable, ALL-SSAB-POE-02 p20 §§59-62 and Table 8

³⁹⁸ SEI 2013 Vol 11-B habitats §1.1.13

³⁹⁹ PPW6 p 70 § 5.1.2 [CD-VATT-PLA-018]

the windfarm development and moreover, even in the long-term, peat restoration on windfarms is uncertain⁴⁰⁰.

- 13.9 Evidence of the rapid rate at which damaged peat dies back⁴⁰¹ is underestimated and the slow and uncertain regeneration of peatland⁴⁰² is side-stepped. The ability of the developer and its contractors to undertake this work successfully is overestimated and no existing peat restoration project can support their assertions.
- 13.10 The Alliance questioned whether the areas of moor not surveyed have been assumed to have a lesser ecological value than is the case. No further evidence has been provided to support the robustness of the assumptions.
- 13.11 Should one or both Llanbrynmair and Carnedd Wen windfarms receive consent there would certainly be cumulative impacts on the blanket bog, and also the Afon Banwy tributaries. The two applications require more than 71km of access tracks in their present form, and should the suggestion of the joining track from the one windfarm to the other be agreed this would increase. The developers have underestimated the effect of the infrastructure on the ecology and hydrology.
- 13.12 Llanbrynmair Moors are indisputably damaged, and much lamented nationally, through inappropriate development driven by financial incentives offered to forestry in the 1970s compounded by reluctance of statutory bodies to provide necessary protection that is well within their powers. It is also indisputable that restoration of habitat inappropriately planted or farmed is far more likely to succeed, than that which has undergone major construction with deposition of inorganic materials installed at depth
- 13.13 The important remnants of SSSI on Corsydd Llanbrynmair give insight into the quality of the moors, damaged by previous approved development. Far greater protection now exists in law and as NPPF on Biodiversity states⁴⁰³ *'the planning system should contribute to and enhance the natural and local environment'*. It is notable that mitigation is not a first option but a last resort.
- 13.14 Uncertainty remains regarding the level of timber extraction. The developers state approximately 150ha timber would be extracted from the site plus a further 30 trees and 1,400 metres of hedgerow would require removal along the access route. The developers assert that future management of the forestry is unknown, should their scheme not be approved; however replanting must comply with regulations that require diversity and softening of

⁴⁰⁰ ALL-SSAB-POE-05

⁴⁰¹ Irish Peat Bogs

⁴⁰² ALL-SSAB-POE-05 p13 § 10.2

⁴⁰³ NPPF para 109 Biodiversity

boundaries. The developers' assertion that 'we don't know' is disingenuous. We know that Wales has less growing timber than any other country in Europe and that replanting must meet legislative requirements.

- 13.15 PCC concluded that the developer's estimate along the access route is approximately a third of their estimate; PCC has not assessed timber extraction from the site; a similar margin of error is a probability.
- 13.16 The relevance of axiophytes in determining the existing quality and potential for habitat restoration has not been considered and such evaluation has not been undertaken; yet without this methodology any assertion of habitat restoration lacks substance
- 13.17 No evidence has been provided that assesses the impact of the development on agricultural water supplies that are currently fed by natural water from the plateau.
- 13.18 There are 18 protected wildlife sites that rely upon Llanbrynmair Moors. The impact on these has not been assessed
- 13.19 The developers have understated the negative impacts of their proposal and are unrealistically optimistic of the benefits for nature conservation, with no real world evidence to support their assertions. Their application fails to meet the guidance in TAN5⁴⁰⁴ (and contravenes Planning Policy Wales 5.1) to '*look for development to provide a net benefit for biodiversity conservation with **no** significant loss of habitats or populations of species, **locally** or nationally*'. [our emphasis]

Peat

- 13.20 As spelt out in the Llanbrynmair SEI over 244,000 sqm. of the infrastructure⁴⁰⁵ (i.e. 64%) is located on peat.
- 13.21 It is proposed to position four turbines on deep peat and 14 (46.6%) are in the vicinity of deep peat.⁴⁰⁶ This is of consequence because of the dewatering effect of the excavations. The peat that is estimated to be affected by dewatering across the whole site is 53,600 cu.m.⁴⁰⁷
- 13.22 Nineteen out of the twenty track sections are in areas which include deep peat but it is not possible to identify from the SEI what length of track is actually on

⁴⁰⁴ TAN5 p 4 § 2.1 4th bullet

⁴⁰⁵ Llanbrynmair SEI August 2013 vol 1 chapter 8 page 300 para8.3.50

⁴⁰⁶ ALL-SSAB-POE-05 page 11 para 6.3

⁴⁰⁷ ALL-SSAB-POE-05 page 12 para 8.1

such peat i.e. over 0.5 m deep⁴⁰⁸. The total length of new track is 21.25 kms.⁴⁰⁹

- 13.23 The total amount of peat to be excavated is 120,900 cu.m. and although it is identified that the majority of this will be reused it relies upon many strict conditions being adhered to for the peat not to release its carbon. The Alliance has expressed concern in our evidence and at the inquiry regarding the risk of failure with the reuse of peat.⁴¹⁰
- 13.24 The Alliance has raised, in its evidence, particular concern about the effect of the infrastructure upon the north eastern part of the site where the peat and the peatland vegetation, which is of international importance, should not be being put at risk.⁴¹¹
- 13.25 Concern has also been raised in our evidence⁴¹² about the risk of failure of the Habitat Management Plan as like the Carnedd Wen scheme it requires the water table to be raised. The increase in height that has to be achieved and therefore the likely risk cannot be identified as a water table level survey has not been undertaken⁴¹³.
- 13.26 The carbon balance is affected by the management of the peat and forestry resource. The Alliance has provided evidence that needs to be taken into account in ensuring that the calculation of the carbon balance reflects recent learning in this respect.⁴¹⁴

Wildlife

- 13.27 The developer acknowledges the extreme sensitivity of Afon Gam⁴¹⁵; construction can cause silting that is highly damaging to aquatic life in particular the salmonids. The Alliance has made the point that the effect of this silting does not affect just one species or one generation but impacts on the wider aquatic life and thus higher species such as otter, salmon and raptors.
- 13.28 RES recorded 79 bird species in the 2006-2008 surveys of which 15 Red and 21 Amber databook species are included. Hen harrier, curlew and black grouse are particularly susceptible to turbine blade strike. There are also 21 Biodiversity Action Plan species.

⁴⁰⁸ ALL-SSAB-POE-05 page 12 para 6.4

⁴⁰⁹ Llanbrynmair SEI August 2013 page 42 para 3.3.23

⁴¹⁰ ALL-SSAB-POE-05 page 11 para 6.1 and 6.2

⁴¹¹ ALL-SSAB-POE-05 page 12 para 9.2

⁴¹² ALL-SSAB-POE-05 page 13 para 10.2

⁴¹³ ALL-SSAB-POE-05 page 13 para 10.2.1

⁴¹⁴ ALL-CLO-POE-02

⁴¹⁵ 2008 ES § 9.4.35 and § 8.3.114

- 13.29 Six species of bat were recorded in the 2006-2008 surveys including the Noctule, which because of its foraging and flight patterns is especially at risk from turbines. Statutory consultees have pointed out the inadequacy of survey data; it is six years since the end of the last survey.
- 13.30 The Alliance is very concerned regarding the discussion at this Inquiry about the “acceptable number of bat deaths”. This is in contravention of the guidance in TAN5⁴¹⁶ (and PPW) to: ‘*ensure that the range and population of protected species is sustained*’. It is of particular concern in light of the inadequacy of the survey effort as agreed by statutory consultees.
- 13.31 The otter survey that was carried out 100m up- and down-stream from Neinthirion failed to find the otter holt constructed by the landowner.
- 13.32 The 2013 SEI and previous iterations conclude that there will be negative impact on almost all species and habitats. There is acknowledgement that habitat and thus species will be considerably worse in the short term and the Alliance has demonstrated that the period that it will take for the habitat to be restored to the existing baseline is far longer than that asserted by the developer. This again contravenes PPW.

Cultural Heritage

- 13.33 Although RES have reduced the effect of the scheme on Heritage Assets by the removal of some turbines the Alliance has presented evidence⁴¹⁷ to show that there are still notable effects, examples are:
- 13.34 *Fridd Cwm y Ffynnon Barrow Cemetery (SAM MG314)* which is situated 1.0km from the nearest Llanbrynmair turbine. 30 turbines would be visible⁴¹⁸ in a 110 degree arc⁴¹⁹. This SAM is very close to Glyndŵr’s Way and therefore the setting will be of particular note.
- 13.35 RES do not produce wireframes of the effect upon cultural heritage assets and therefore it is difficult to fully realise. However Carnedd Wen have produced a wireframe, which shows both windfarms⁴²⁰. It must be appreciated though that the 6 closest Llanbrynmair turbines have been removed.
- 13.36 *Moel Ddolwen Hillfort (SAM MG 149)* which although 2.2 km away, experiences the majority of the Llanbrynmair turbines throughout most of the

⁴¹⁶ TAN5 p 5 § 2.4 7th bullet and see PPW6 §§ 5.2.3, 5.5.11 and 5.5.12

⁴¹⁷ ALL-SSAB-POE-06

⁴¹⁸ Llanbrynmair SEI August 2013 volume 1 page 260 para 7.7.35

⁴¹⁹ Llanbrynmair SEI August 2013 volume 1 page 267 para 7.7.88

⁴²⁰ Carnedd Wen August 2009 SEI volume 2 fig 10 B.15

western quadrant.⁴²¹ Again Glyndŵr's Way passes close by and therefore appreciation of the setting is important.

- 13.37 *Abercannon (listed building 17942)* is a traditional longhouse stone building probably of 18th century date and the list description is of 'a well preserved farmhouse which is typical of this area'
- 13.38 Our proof⁴²² used a Carnedd Wen wireframe to show the effect but the residential wireframes produced at the inquiry by RES now give a full appreciation of the very large effect upon this listed building⁴²³.

Visual and Landscape

- 13.39 Mr Van Greiken stated during questioning on 5th November 2013 that landscape assessment was part of the original TAN8. Alliance scrutiny of the Advice Note has found nothing to support this assertion; to date RES has provided nothing to support his assertion.
- 13.40 The effect on the landscape can be well judged by the viewpoint photomontages dealt with in our Glyndŵr's Way section, and our proof,⁴²⁴ as the trail is designed to fully appreciate the outstanding landscape.
- 13.41 However the photomontage at Viewpoint 23 (minor road within Cwm Nant-yr-Eira) that we have raised at the inquiry and included on the Inspector's visit should always be borne in mind when considering the effect of the scheme upon Cwm Nant-yr-Eira, the Llanerfyl Mosaic farmlands and the hills and uplands.

Recreational Use: Public Rights of Way and National Trails

- 13.42 The proposal intrudes on Glyndŵr's Way National Trail for a distance far greater than when actually surrounded by turbines due to the location and altitude of the proposed site, and as TAN16 indicates access to the countryside is important to the rural economy and PPW⁴²⁵ Powys UDP states: '*Local Authorities should seek to protect and enhance the rights of way network as a recreational and environmental resource.*' The Alliance and local tourism providers have submitted much evidence demonstrating the value of Glyndŵr's Way National Trail, Public Rights or Way, footpaths and bridleways as well as the importance of the open access areas of which a good proportion of the proposed site is open access.

⁴²¹ Carnedd Wen August 2009 SEI volume 2 fig 10 B.18

⁴²² ALL-SSAB-POE-06

⁴²³ Llanbrynmair SEI August 2013 volume 2A App 4.1 Figs 13c-f

⁴²⁴ ALL-SSAB-POE-03

⁴²⁵ PPW6 p 155 § 11.1.13

- 13.43 Evidence regarding the value of the tranquillity on the trail as one traverses Llanbrynmair Moors has been described by a number of members of the public; for example Barry Smith ⁴²⁶ presented evidence regarding its value to his business and visitors.
- 13.44 Users of Glyndŵr's Way and the access land are by their intention to access such tranquillity, of high sensitivity and RES considerably underestimates the impact that would be felt by those without financial incentive.
- 13.45 Our evidence⁴²⁷ and RES's Aug 2013 SEI⁴²⁸ show that the effect on the Trail will be major.
- 13.46 A sequence of views for over 15 kms running through the viewpoints 24, 6, 4, 5, 1 and 10 ⁴²⁹ in the SEI demonstrate that the walkers' experience will be dominated by the presence of the turbines.
- 13.47 It even appears that for perhaps 24 months of the construction the walker will have to be accompanied through the site for some considerable distance.
- 13.48 The Trail passes so close to the turbines above Cwnderwen that, as the Viewpoint 1 photomontages show the effect can perhaps only be described as, without exaggeration, frightening.

Transport Route

- 13.49 Transport from Ellesmere Port is covered elsewhere but the Alliance notes the lack of clarity as to the access route for this proposal. At this stage of the Inquiry local people still do not know whether the developers would bring AILs through Cwm Nant yr Eira or whether they may finally reach agreement and use the Carnedd Wen access track. After four years in the planning system plus one year at Public Inquiry we don't know how the turbines would reach the top of the moors.
- 13.50 We do; however, know with certainty that the developers have been refused access at Neinthirion; a matter that has attracted little attention but was stated by the owners of the property, at this Inquiry.
- 13.51 The proposed access route for both AIL and general construction traffic along the 17.5km county road between Talerddig and Llanerfyl is a totally unsuitable proposition. A Chartered Civil engineer (Alliance member) of 40 years experience involving highway design has submitted evidence to the Inquiry on the issues of highway safety at the Talerddig junction, complete unsuitability

⁴²⁶ ALL-SSAB-POE-01 Individual and Group Statements No 26

⁴²⁷ ALL-SSAB-POE-03

⁴²⁸ Llanbrynmair SEI Aug 2013 volume 1 page 132

⁴²⁹ Llanbrynmair SEI Aug 2013 volume 3 figs 4.25, 4.36, 4.18, 4.16, 4.17, 4.13, 4.22

of the route from Talerddig up to the Moor, engineering difficulties with the proposed alterations from Llanerfyl to the Moor, and the completely unacceptable diversions proposed for local residents⁴³⁰.

- 13.52 Statements were read at the Public Inquiry session at Banwy which illustrated the real hardship local people would suffer with about 30 mile diversions to get from their home to places such as Llanfair Caereinion⁴³¹.
- 13.53 Even if the route through Carnedd Wen were to be utilised for the AIL traffic the Alliance cannot agree that the proposed access for all other construction traffic can be the county road from Talerddig to the Moor. This is for the reasons explained in the proof above.
- 13.54 RES are proposing that night working would be allowed for the substantial alterations proposed at Gosen Bridge, if permission were granted. There are residents extremely close to this bridge and conditions would, as requested at the Inquiry, have to be imposed to prevent such working.

Effects on residents

- 13.55 Residents, as the terminology is expressed, are receptors of a high sensitivity.
- 13.56 Evidence has been received from a number of these residents, both in the Inquiry sessions and contained within the Alliance 'Compendium' of statements⁴³². It is notable that only one person, who is not a resident, spoke or submitted evidence in favour of Carnedd Wen or Llanbryn-mair applications at any Inquiry session. In contrast more than 30 people who live locally to Llanbryn-mair Moors spoke against the proposals and gave a written submission as well.
- 13.57 Members of the Llanbryn-mair community undertook a survey of residents; the results were unequivocal: 89% against windfarm proposals, 91% against National Grid's proposals. It is worth noting that this community is already in receipt of community benefits from existing windfarms but remains resolutely opposed to the construction of further turbines (as is Cefn Coch). This demonstrates a) windfarms do not become more acceptable once they are built, or over time and that community benefits are not seen as recompense for loss of visual amenity or as a route to socio-economic advantages.
- 13.58 Residential properties along Cwm Nant-yr-Eira are particularly affected by the Llanbryn-mair scheme. The turbines themselves will have an overpowering presence on the valley and this will be augmented by the infrastructure works

⁴³⁰ ALL-SSAB-SPOE-07 paras 2.4-2.16

⁴³¹ OBJ-965-001

⁴³² ALL-SSAB-POE-01 Individual and Group Statements

such as access tracks, sub-station, the 132kV overhead line and the considerable roadwork's required for AIL & HGV traffic.

- 13.59 The residential wireframes were used when they became available at the inquiry to inform residents. Obviously concern has been strongly expressed by them and the Inspector has visited the curtilage of three properties that experience major effects. Those properties are represented in the wireframes as follows:

Neinthirion, property reference P15⁴³³

Ffridd Fawr, property reference P21⁴³⁴

Castell-y-Gwynt, property reference P22⁴³⁵

- 13.60 Visual amenity would also be affected; recently published impartial research from the London School of Economics⁴³⁶ indicates these residents are likely to suffer financial loss should they need to sell their homes or raise collateral to develop their businesses.
- 13.61 Evidence regarding the impact on homes and small businesses was also highlighted in the case of the owners of Castell yr Gwynt where their nationally renowned kennels are situated, and Ffridd Fawr when the owner informed the Inquiry of her property valuation showing reduction in value of some £50,000.
- 13.62 The Alliance has provided evidence to identify that there is a risk to private water supplies⁴³⁷. The SEI identifies that five properties' water supply could potentially be affected by hydrological issues. It has not been possible to identify any actions in the SEI that are to be implemented to safeguard the properties affected. In order to safeguard public health it is important that conditions are implemented should the development be approved. .

Tourism and Economy

- 13.63 Walkers and riders are important, all year round visitors. The impact of both construction and operation of Llanbrynmair would reduce numbers visiting the area and the tourism economy would suffer as a result.
- 13.64 This gives rise to serious concerns for lost income to tourism businesses and also the support that tourism provides to the rural economy in terms of local facilities and their viability as identified by the WG Commission on Rural

⁴³³ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 15 c-e

⁴³⁴ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 21 c-f

⁴³⁵ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 22 c-e

⁴³⁶ Gibbons LSE

⁴³⁷ ALL-SSAB-POE-05 page 14 para 12

Tourism⁴³⁸. As described by tourism business owners to the Inspector, a reduction in income of 20 % would mean that the business cannot continue.

- 13.65 Evidence provided from operational windfarms⁴³⁹ and research into the impact of windfarms on rural Wales⁴⁴⁰ demonstrates that very few jobs will be created to benefit the local economy and that community benefits are not an economic boost.
- 13.66 RES provided a tourism prediction study⁴⁴¹ that concluded the development of the windfarm would have no impact. However, analysis shows that little weight can be placed on this almost entirely desk based study that relies substantially on the completely unreliable practice of extrapolation from predictive studies in unrelated areas⁴⁴². This is at odds with the recent Welsh Tourism Study, which concludes that in North Powys the impact of windfarms will be of a greater magnitude than elsewhere in Wales given the visitor and sector characteristics⁴⁴³.

The RES Study is unreliable given:

- i) Serious underestimation of actual and potential tourism through using the number of designated tourist attractions as a proxy and using an incomplete inventory of tourism related businesses. The study completely misses the main attractions of expansive, tranquil, unspoilt landscapes, the opportunity for outdoor activities and the absence of honeypot tourist sites. The recent Regeneris Study makes a more accurate assessment and recognises the importance of these factors and the resultant increased sensitivity of North Powys visitors to windfarm development⁴⁴⁴. Successful local businesses, such as Barlings Barn, that have provided statements to this Inquiry⁴⁴⁵, market themselves on these very attributes which the proposed windfarm would destroy.
- ii) The Study is not informed by any visitor interviews but when the views of caravan park visitors were sought as part of the Llanbryn-mair community survey⁴⁴⁶, it was evident that the majority of respondents expressed their dismay at the impact the proposals would have on the area.

⁴³⁸ Alliance Proof on tourism

⁴³⁹ Alliance Proof Tourism

⁴⁴⁰ Munday et al cited in Alliance Proof

⁴⁴¹ Prof. C. Aitchison Tourism Impact Analysis. Llanbryn-mair Windfarm 2012 for RES UK and Ireland

⁴⁴² Aitchison 3.3.4 '*Major error relates to the interpretation and extrapolation of data where, instead of conducting primary research, conclusions have been drawn by extrapolating data, often in a selective or even biased way, in an attempt to demonstrate that conclusions reached in one study at one time and in one location will not only hold true in other spatial and temporal environments but can be applied to much larger areas.*'

⁴⁴³ See Alliance Proof on tourism quoting from Regeneris Report:

⁴⁴⁴ See Alliance Proof on tourism

⁴⁴⁵ ALL-POE Annexe

⁴⁴⁶ Llanbryn-mair Survey. CPI doc

- iii) The Study draws extensively on a Fullabrook survey carried out in 2004⁴⁴⁷. Attitudes to windfarms have changed considerably in the intervening years as has the size of the turbines and the area has a very different tourist offer. This was a single windfarm without cumulative, transport or major infrastructure impacts so it is not possible to make meaningful comparisons.
- iv) The impact on Glyndŵr's Way, one of only two Welsh National Trails, is ignored despite walkers having to pass many miles through, or in sight of, turbines and transmission infrastructure. Walkers' tendency to avoid windfarm areas is increasingly well evidenced⁴⁴⁸ and negative reactions of walkers are clear from oral and written statements to this Inquiry⁴⁴⁹. The potential for a major cumulative impact with Carnedd Wen has not been addressed. Many accommodation providers depend on long distance walkers and the multiplicity of Rights of Way attract day visitors who also contribute significantly to the local economy⁴⁵⁰.
- v) Riders are uniquely impacted by wind turbines and it is evident from BHS surveys that even experienced riders will avoid windfarm areas⁴⁵¹. This increasingly important tourism sector is omitted from consideration.
- vi) The effect of many years of construction traffic is not considered. The A470 through Llanbrynmair and the A458 through Llanerfyl are major, albeit narrow and winding, Cambrian Coast and National Park access routes bringing considerable 'passing trade' to local businesses such as Machinations.
- vii) RES do not assess the disproportionate socio-economic effects of even a small reduction in visitors to a rural economy, where not only tourism businesses but local trades, shops and other facilities are also impacted.

13.67 Cumulative impacts with the juxtaposed Carnedd Wen windfarm or the resultant transmission infrastructure are not considered although visitors would have the impression of a moorland totally dominated by massive, incongruously moving and jumbled structures as can be seen in photomontages⁴⁵².

⁴⁴⁷ Aitchison University of the West of England (2004) Fullabrook for RES

⁴⁴⁸ ALL rebuttal and ALL POE Welsh Tourist Board

⁴⁴⁹ ALL Compendium Bob Wright

⁴⁵⁰ ALL-S4-POE-04

⁴⁵¹ ALL-SOCIOECO-REBUTTAL-S4-04

⁴⁵² tba

Section 14: Carnedd Wen (RWE)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30.0% load factor) ⁴⁵³	Grid Connection	Contribution to 15% target ⁴⁵⁴
50	150 MW	392,100 MWh	None included	0.34%
Alliance Inquiry Documents ⁴⁵⁵				
ALL-SOC-SSA-B, ALL-SSAB-POE-01 to -07, ALL-014 to -016 and all documents tabulated within sections 1 – 8 above				

- 14.1 Carnedd Wen proposed site covers some 1,400Ha and is situated on an extensive plateau known as Llanbrynmair Moors. The RWE proposal comprises 50 turbines, 137m to blade tip. In the north the proposal consumes, Ffridd Goch, Bryn Ysguthan, Carnedd Cylch and Carnedd Wen, and further south Cors Fforchog. For most of its 7km length the proposed turbines would clash visually with those proposed on Llanbrynmair. Associated infrastructure includes 43.98 km of access tracks as well as crane pads, 5 construction compounds, 6 borrow pits and a substation.

EN-1 Contribution⁴⁵⁶

- 14.2 The installed (or 'nameplate') capacity of 150 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)⁴⁵⁷.
- 14.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.34%⁴⁵⁸. And in terms of its contribution to security of supply of the GB system, would contribute about

⁴⁵³ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described, including the note to Table 3

⁴⁵⁴ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

⁴⁵⁵ As supplied to the Inspector, main parties, and the Inquiry library

⁴⁵⁶ EN-1 §4.1.3

⁴⁵⁷ Constable, ALL-SSAB-POE-02 p13 §16, p19 §44 *et seq*

⁴⁵⁸ Constable, ALL-SSAB-POE-02 p18 Table 6

0.03% - 0.04%⁴⁵⁹. CO₂ savings are assessed at about 0.12% of UK national emissions (on the basis of a grid average emissions factor)⁴⁶⁰.

- 14.4 In a nutshell, that encapsulates the “contribution” from the RES proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed)
- 14.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 14.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Peat, Habitat and Hydrology

- 14.7 Botanical surveys⁴⁶¹ carried out in the 1970s found that the Moor was a complex mosaic of blanket bog and associated habitats giving rise to high botanical diversity. It was believed to have been one of the best examples of such upland habitat in Wales.
- 14.8 We of course fully understand that RWE are proposing to carry out a massive habitat restoration programme of the area that has been planted with conifer. However we have major concerns, which we have put as evidence⁴⁶² before the inquiry regarding the viability, ecological risks, and carbon balance effects of this habitat restoration, combined with the effects of the windfarm construction.
- 14.9 From 2008 to the publication of the July 2013 SEI, the Habitat Management Plan focussed primarily on the improvement of habitat for Black Grouse and Hen Harrier. As Black Grouse appeared to have left the site the July 2013 SEI re-focussed the plan on habitats in their own right, rather than supporting structures for individual bird species⁴⁶³. The Habitat Management Plan is now referred to as the Habitat Restoration and Management Plan (HRMP).
- 14.10 The preparation of the site for the windfarm and the HRMP requires clearance of parts of the forest and the scale of the operations is quite staggering. The areas of forest to be felled in each of five years are 515 ha, 200 ha, 372 ha

⁴⁵⁹ Constable, ALL-SSAB-POE-02 p20 Table 7

⁴⁶⁰ Constable, ALL-SSAB-POE-02 p20 §§59-62 and Table 8

⁴⁶¹ Carnedd Wen SEI 2013 Volume 4 Section 1.4 para 8

⁴⁶² All-SSAB-POE-05

⁴⁶³ Carnedd Wen SEI July 2013 Volume 1 Chapter 2 para 61

and 148 ha⁴⁶⁴. In the Carnedd Wen ES December 2008 UPM Tilhill, the UK's leading forestry company, said: *'the scale of the harvesting operation proposed must not be underestimated. Typically, harvesting contracts extend to less than 100 hectares in any one year, here we are proposing operation of up to 400 hectares in one year'*⁴⁶⁵.

- 14.11 Although the total amount of felling in the latest plan has reduced from 1,490ha to 1,235ha the yearly rate of removal as seen above has become even higher in one year, and in every year is considerably higher (148% to 515%) than the industry leader considers the normal maximum. The effects upon an extremely fragile ecosystem of deep peat beneath forest and the consequent hydrological and ecological effects are difficult to comprehend.
- 14.12 What is more, during seven years interleaved with forest removal, habitat and peat restoration, and windfarm and access track construction, the following operations will also be being undertaken on this ecologically fragile site:
- i) the blocking of well in excess of 60 kilometres⁴⁶⁶ of forest peat drains;
 - ii) the construction of 12.6 kms of new track and 4.3 kms new floated track;
 - iii) the major upgrading of 20 kms of track and 6.7 kms of floating track⁴⁶⁷;
 - iv) the management of very large quantities of brash and non-marketable timber around the site⁴⁶⁸;
 - v) the construction of 50 concrete turbine bases, and crane pads which are 2.8 times the area of the turbine bases⁴⁶⁹;
 - vi) the digging of many kms of trenches for cables;
 - vii) the excavation of 6 borrow pits (70,281 sq.m.) and installation of construction compounds (13,500 sq. m) and substation (4,875 sq.m.).⁴⁷⁰
- 14.13 The total amount of peat that RWE estimate will have to be excavated is 183,842 cu.m. Although RWE estimate that nearly all of this can be used for 'restoration' around the site the ecological effect of disturbing such large volumes cannot be discounted as we have demonstrated in our proof.⁴⁷¹
- 14.14 It has to be realised that all the above is an undertaking of a massive scale to be contemplating in such a fragile ecosystem and which could also have such profound effects upon the surrounding ecosystems.

⁴⁶⁴ Carnedd Wen SEI July 2013 Volume 4 Section 1.3 page 11 Table 3

⁴⁶⁵ Carnedd Wen ES Dec 2008 Volume 2A Appendix 4.1 page 6

⁴⁶⁶ Carnedd Wen Peat Management Plan April 2013 page 43 sections 4.3.2.2 Table 10 and 4.3.2.4

⁴⁶⁷ Carnedd Wen Peat Management Plan April 2013 page 36 Table 6

⁴⁶⁸ Carnedd Wen Forestry Management Plan July 2013 page 115 section 5.4 para 76-83

⁴⁶⁹ Carnedd Wen Peat Management Plan April 2013 Section 4.2

⁴⁷⁰ Carnedd Wen Peat Management Plan April 2013 Section 4.2

⁴⁷¹ ALL-SSAB-POE-05 section 2.2 and 2.4

- 14.15 RWE maintain that their suite of management plans i.e. Outline Habitat Restoration and Management Plan, Forestry Management Plan, Peat Management Plan, Draft Drainage Management Plan, and Draft Construction and Environmental Management Plan will control the risks to this fragile environment from this complex operation in an upland area with challenging weather conditions.
- 14.16 As we have shown in our evidence⁴⁷², there are significant risks that such a multitude of requirements could not be feasibly implemented in their entirety in such a hostile and fragile environment.
- 14.17 Even RWE themselves in their Peat Management Plan⁴⁷³ state that the guidance regarding construction, as opposed to restoration activities, conflict with each other seasonally. Other seasonal requirements, such as ornithological ones, will obviously add to the complexity.
- 14.18 It must also be pointed out that the proposed Llanbrynmair windfarm is adjacent and interleaved with the Carnedd Wen site and similar construction, habitat, forestry, peat and drainage management interventions will be being undertaken in the same environment at similar times.
- 14.19 As if the above issues were not enough in themselves the following scale of factors must be realised:
- 14.20 Although RWE have undertaken 'mitigation' in order to try and reduce the effect of the scheme upon deep peat (defined as greater than 0.5 m by Natural Resources Wales) the amount of infrastructure on such peat, as our evidence shows ⁴⁷⁴, is still considerable:
- i) 37 (i.e. 74%) of the turbines are located on deep peat and 15 are located on peat deeper than 1.0 metre.⁴⁷⁵
 - ii) Three of the six borrow pits and even three of the five construction compounds are located on deep peat.
 - iii) The construction of the access tracks will require excavation of 65,323 cu.m. of peat and 11 kms of further tracks are 'floated' because of the peat depth being greater than 1.0 metre.
- 14.21 The Habitat Restoration of blanket bog, as we have shown in our evidence⁴⁷⁶, is particularly dependant on raising of the water table to within 10 cm of the ground surface. This is as spelt out in the RWE Habitat Management Plan⁴⁷⁷.

⁴⁷² ALL-SSAB-POE-05 section 2.2

⁴⁷³ Carnedd Wen Peat Management Plan April 2013 section 5.3.4.6 para 154

⁴⁷⁴ ALL-SSAB-POE-05 para 2.1.2

⁴⁷⁵ Carnedd Wen SEI 2013 Volume 4 Section 1.5 page 30 onwards. Tables 2,3,4,5,6&7

⁴⁷⁶ ALL-SSAB-POE-05 section 3.5.3

⁴⁷⁷ Carnedd Wen Habitat Management Plan Feb 2013 page 11 para 38

The Carnedd Wen SEI 2011 states: *'the target is to ensure that the water table is raised from a likely present depth of 50-60 cms under the trees.'*⁴⁷⁸

- 14.22 Thus a raising of the water table by approximately 40-50cms is required. Our evidence shows⁴⁷⁹ that, even at Black Law and the Welsh EU LIFE Active Blanket Bog project, such a magnitude of change has not been achieved and we have been unable to identify anywhere that such a height change has been achieved.
- 14.23 We are extremely concerned that the projected habitat restoration of peat and blanket bog will not be achieved. The major operations to install this restoration and the windfarm infrastructure as described above will also lead to significant loss in this fragile, but very important, ecosystem due to the controls not being sufficient and/or impracticable to implement to the necessary degree. On top of this huge risk there will be an acknowledged loss, disturbance, or changing of, as pointed out in our evidence⁴⁸⁰, of 28.7 ha of blanket bog and 14.7 ha of Mire/Flush. The RWE documentation also appears to be silent on the amount of peat affected by dewatering i.e. the peat that is degraded by the disturbance of the hydrological regime due to track, foundation and crane pad installation⁴⁸¹. This is usually of considerable significance in an area of such extensive and deep peat.
- 14.24 As the above evidence shows there is definite loss to the ecology of the area: the likelihood of the restoration scheme being successful is slight, and the likelihood of the risks from the works leading to considerable damage very high.
- 14.25 Where there is deep peat, the UK Forestry Standard now limits replanting or requires a much more sympathetic scheme. The ecology of the area would most likely be at far less risk with a more gradual transition to a new environment.
- 14.26 As shown in our evidence⁴⁸² the Habitat Restoration has a negative effect upon carbon losses compared with leaving the forest in place. This conclusion is reached from RWE's own figures. These show a 0.9 million tonnes CO₂ loss for the restoration compared with a 0.5 million tonnes CO₂ gain if the forest remained. This leads to the total windfarm and habitat scheme having a poor CO₂ pay back time in RWEs worst case assessment of 6.9 years.⁴⁸³

⁴⁷⁸ Carnedd Wen SEI Sept 2011 volume 2 appendix 7.2 page 38

⁴⁷⁹ ALL-SSAB-POE-05 paras 3.5.3.2 & 3.5.3.3

⁴⁸⁰ ALL-SSAB-POE-05 paras 2.4.3 and 2.4.4

⁴⁸¹ ALL-SSAB-POE-05 para 2.3.2

⁴⁸² ALL-SSAB-POE-05 para 4.2

⁴⁸³ Carnedd Wen SEI July 2013 Appendix 1.1 page 2 sec7.1 para 3

14.27 The Alliance has submitted evidence to show that issues not taken account of in the Carbon Balance will mean that this figure will be significantly optimistic⁴⁸⁴. Obviously, the considerable risk to the fragile ecology of Llanbrynmair Moor and its surroundings is not compensated for by an appropriate carbon balance.

Wildlife

- 14.28 RWE admits that otter are present in the watercourse around the site; run-off from works will affect the water quality and this will undoubtedly have negative impact on the local otter population. Nine species of bats, water voles and badgers, hen harrier, red grouse, as well of course, as is now accepted, black grouse are all present.
- 14.29 Their conclusion, having undertaken this work is that despite not knowing what level of populations or distribution, and being less than clear on the presence of key species such as black grouse, RWE states that '*there were not likely to be unacceptable impacts on European Species. While there were likely to be some significant negative impacts on other ecological features during the construction work or, in the case of woodland songbirds, the forestry operations*'.
- 14.30 RWE states⁴⁸⁵ that *cumulative ecological impacts are only likely to arise in the case of bird populations and only in combination with the adjacent Llanbrynmair*' application. It is self evident that it would require the adjacent application to create **cumulative** impacts.
- 14.31 Later in the same paragraph RWE identifies '*significant negative impact on a number of UK BAP species including dunnock, song thrush, lesser redpoll and bullfinch*'. The Alliance draws the Inspector's attention to the importance of the avian population as indicator species and the impact of these songbirds in the avian foodchain. RWE accepts that Carnedd Wen would create the greatest damage and that they cannot offer any mitigation⁴⁸⁶. This ignores guidance in TAN5 and contravenes PPW⁴⁸⁷.
- 14.32 The developers have understated the negative impacts of their proposal and are unrealistically optimistic of the benefits for nature conservation, with no real world evidence to support their assertions. Their application fails to meet guidance in TAN5⁴⁸⁸ and contravenes Planning Policy Wales 5.1: '*Look for development to provide a net benefit for biodiversity conservation with **no***

⁴⁸⁴ Carbon Balance: Considerations of particular concern regarding Conjoined Inquiry schemes

⁴⁸⁵ Stewart Lowther POE § 62

⁴⁸⁶ Stewart Lowther POE §62

⁴⁸⁷ TAN5 Chapter 2.21 & PPW 5.1

⁴⁸⁸ TAN5 Chapter 2 2.1

significant loss of habitats or populations of species, locally or nationally. It is important that their duties under sections 40 and 42 of the Natural Environment and Rural Communities (NERC) Act 2006 are fully complied with.

Cultural Heritage

- 14.33 Planning Practice Guidance for Renewables⁴⁸⁹ states that: *‘Great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.’* The Alliance would request that the Inspector and the Secretary of State exercise that required care in determining the acceptability of these proposals balanced against the overwhelming loss of heritage value.
- 14.34 RWE maintain throughout their ES and SEIs that there will be no harm to the settings of cultural heritage assets, and Karl Cradick, in his proof of evidence on planning balance, states that 14 assets within 5 km of the proposal are assessed, and in all cases there would be no adverse effect⁴⁹⁰.
- 14.35 As we have shown in our evidence⁴⁹¹, with reference to Carnedd Wen wireframes, the reality of the effect upon settings for at least 5 Scheduled Ancient Monuments is very difficult to describe as ‘no adverse effect’. This is particularly the case as far as a local resident or visitor would perceive it.
- 14.36 Examples are: Fridd Cwm y Ffynnon Barrow Cemetery, which at 0.7km from the nearest Carnedd Wen turbine is particularly affected by 12 turbines⁴⁹². This SAM is very close to Glyndwr’s Way and therefore the setting will be of particular note.
- 14.37 Pencad Cymru Cairn which although at 2.0 km from the turbines is particularly affected by the mass of the 50 Carnedd Wen turbines.⁴⁹³
- 14.38 Moel Ddolwen Hillfort which although 2.7km away, experiences a complete wall of turbines to the west.⁴⁹⁴ Again Glyndwr’s Way passes close by and therefore appreciation of the setting is important.
- 14.39 The Alliance is therefore completely unable to agree that the Carnedd Wen development will have no adverse effect upon Cultural Heritage. Should

⁴⁸⁹ Planning Practice Guidance for Renewables and Low Carbon Energy 2013 DCLG para 15 cited in ALL-SSAC-POE-05 para 9

⁴⁹⁰ Hearing Statement, Planning Balance, Planning Conditions and Legal Undertakings, Karl Cradick p58 § 8.9

⁴⁹¹ ALL-SSAB-POE-06

⁴⁹² Carnedd Wen August 2009 SEI volume 2 fig 10B.15

⁴⁹³ Carnedd Wen August 2009 SEI volume 2 fig 10B.16

⁴⁹⁴ Carnedd Wen August 2009 SEI volume 2 fig 10 B.18

Llanbrynmair also be consented then there would be an additional cumulative impact on all these assets.

- 14.40 That CADW have not maintained an objection is not unusual as their concern is predominantly physical damage to an artefact. As noted by Inspector Jones at Bryn Llewellyn application ⁴⁹⁵ the lack of objection does not necessarily indicate that the proximate siting of a turbine is acceptable to the setting and interpretation.

Visual and Landscape

- 14.41 The plateau on which the application would stand, rises to some 500 metres, and added to this the height of the turbines is 137m. This proposal would dominate the skyline from all directions, with the only locations of greater height being Cadair Berwyn to the north and Bryn Coch on the Radnorshire border.
- 14.42 Mr Stevenson stated in his evidence to NRW that, *tranquillity will be much diminished*, should the development be given consent. He also accepted that the developments would *create a windfarm landscape*.
- 14.43 Should a number of schemes in planning be consented, from certain vantage points, as photomontages before this Inquiry show, ⁴⁹⁶ there will be an unacceptable and virtually unbroken 300 degree cumulative view of turbines, numbering 182 in total ⁴⁹⁷ again contravening good design practice.
- 14.44 The Alliance has submitted detailed evidence⁴⁹⁸ to the Inquiry regarding the effect the scheme will have by itself and in combination with Llanbrynmair on the special qualities of the Snowdonia National Park. Residents are frankly amazed that such despoliation is even being considered especially when the draft TAN 8 called up a buffer zone⁴⁹⁹ around the National Parks.

Effects on residents

- 14.45 Evidence has been received from a number of residents, in the Inquiry sessions, contained within the Alliance Compendium and independently submitted. It is notable that only one person, who is not a resident, spoke or submitted evidence in favour of Carnedd Wen or Llanbrynmair applications at any Inquiry session. In contrast more than 30 people who live locally to

⁴⁹⁵ Appeal decision Jones

⁴⁹⁶ RWE & RES cumulative 1a, 1b, 1c, 1d

⁴⁹⁷ Including Mynydd Waun Fawr, withdrawn, but excluding Mynydd Lluest y Graig, which includes MWF and the site previously known and Rhyd Ddu. Less than 2km from the nearest RES turbine.

⁴⁹⁸ ALL-SSAB-POE-03 paras 79-93

⁴⁹⁹ All-09 para 6.8

Llanbrynmair Moors spoke against the proposals and gave a written submission as well.

- 14.46 Visual amenity would also be affected; recently published impartial research from the London School of Economics⁵⁰⁰ indicates these residents are likely to suffer financial loss should they need to sell their home.
- 14.47 A number of residents have provided evidence regarding the devaluation of their homes. As the Inspector is aware, when selling a property the vendor is legally obliged to admit to any difficulties or conflicts they have had in their neighbourhood; those who have provided such evidence to this Inquiry have taken immense risk in speaking out. Many have not been so brave but remain trapped in properties they cannot sell nor afford to keep.
- 14.48 Banwy Community Council⁵⁰¹ undertook a community survey; the results were unequivocal; 70% responded, and of those 72% are opposed to windfarms and 83% are opposed to grid strengthening proposals.
- 14.49 Residents in the Banwy valley are particularly concerned about the visual effect upon their neighbourhood and the evidence submitted by many is exemplified by that of a compendium entry⁵⁰². Residences on both the western and eastern side of the valley are affected and the inspector paid site visits to those locations at the request of residents.
- 14.50 Banwy CC also pointed out that the A458 from Shrewsbury to Mallwyd is free of windfarms. They believe this to be the last main route from England to the Welsh coast that is not despoiled by windfarms.
- 14.51 The Alliance has submitted evidence that raises concern about private water supplies⁵⁰³. The SEI July 2013 identifies 45 private water supplies in the vicinity of the development but it gives no information, as far as we can see, as to how they are to be safeguarded. Obviously relevant conditions are required to safeguard public health.

Tourism and Economy

- 14.52 The proposal intrudes on Glyndwr's Way National Trail whenever the trail has open views, due to the location and altitude of the proposed site; as TAN16 indicates access to the countryside is important to the rural economy and PPW⁵⁰⁴ Powys UDP states: '*Local Authorities should seek to protect and*

⁵⁰⁰ Gibbons LSE (2013 draft/ published 2014) referenced in ALL-S4-POE-04 and supplied as Alliance Core document for tourism and economy

⁵⁰¹ OBJ-816-POE

⁵⁰² ALL-SSAB-POE-01R no 44 1-8

⁵⁰³ ALL-SSAB-POE-05 page 11 para 5.1

⁵⁰⁴ PPW 11.1.13

enhance the rights of way network as a recreational and environmental resource.' The Alliance and local tourism providers have submitted considerable evidence that has shown the value of Glyndwr's Way, Great Dragon Trail, Public Rights of Way, footpaths and bridleways as well as the importance of the open access areas occupying a good proportion of the proposed site.

- 14.53 RWE have stated that Glyndwr's Way will remain open throughout construction and ongoing maintenance of the windfarm and well as periods of and high winds. However the effect upon Glyndwr's Way as evidenced in our landscape proof⁵⁰⁵ is severe. Not only will the turbines be the characterising feature over many kilometres of the route, but the way has to pass through an avenue of Carnedd Wen turbines for two kilometres.⁵⁰⁶ The cumulative effect in this area above Cwmdrwen (see our Llanbrynmair section) will be severe.
- 14.54 Evidence regarding the value of the tranquillity on the Trail as one traverses Llanbrynmair Moors has been described by a number of members of the public⁵⁰⁷ presenting evidence regarding its value to businesses and visitors. Users of Glyndwr's Way and the access land are by their intention to reach such tranquillity, of high sensitivity and the ES considerably underestimates the impact that would be felt by those without financial incentive.
- 14.55 The Powys UDP policy E3 on Windpower states: *'Applications for windfarms will be approved where, inter alia, they do not unacceptably affect the enjoyment and safe use of highways and the PRow network, especially bridleways.'*
- 14.56 Walkers' opinions do not necessarily support conclusions reached by Regeneris in their reports⁵⁰⁸ Far from being a significant enhancement to Glyndwr's Way⁵⁰⁹, walking through miles of brash and felled stumps is not universally enjoyed, neither is an avenue of towering turbines as opposed to the expected natural environment. The commercial forest would be felled in due course and as this is peatland any replanting would have to conform to the new Forestry Guidelines for planting on peat and would not constitute geometric, dense conifer planting; the open landscapes could then be enjoyed by walkers without the intrusion of turbines and infrastructure.
- 14.57 It is further of note that many walkers on long distance paths have a very negative view of windfarms as expressed in the Mountaineering Council of Scotland 2014 survey⁵¹⁰ that evidenced some 2/3rds of walkers and

⁵⁰⁵ ALL-SSAB-POE-03 para 96-102

⁵⁰⁶ Enplan map produced by Powys.C.C. for the Inquiry [CD/002/003]

⁵⁰⁷ ALL-SSAB-POE-01 Individual and Group Statements No 26

⁵⁰⁸ Study on Windfarms in Wales and Study for RWE on the Habitat restoration project

⁵⁰⁹ Regeneris report 7.70 All-SOCIOECO-POE-S4-04-ADDENDUM

⁵¹⁰ ALL-SOCIOECO-REBUTTAL-S4-04 §5.7

mountaineers avoiding areas with windfarms and 68% believing they spoil the views. Ramblers' Cymru policy is unequivocal in stating⁵¹¹ : *'We are specially concerned about the proliferation of large scale on-shore wind schemes and the degradation to the Welsh landscape and walking environment these are causing'* Similar concern is not expressed regarding forests. In fact a survey by the Welsh Tourist Board showed that less than 30% of visitors to rural Wales actually disliked regimented coniferous forests⁵¹² so the assumption that these are a major deterrent to visitors is unfounded.

- 14.58 RWE's consultants, Regeneris, have produced a report detailing the large number of jobs to be created by the windfarm and habitat restoration project. The figures are predictions only and based on the existence of substantial manufacturing capacity and the availability of local supply chains and extrapolation to proposed windfarm projects in areas with very different socio-economic characteristics. They also conflate on- and off- shore employment figures which is misleading as off-shore can demonstrably provide significant numbers of jobs and the UK has some market advantage.
- 14.59 As the Alliance has demonstrated there is a considerable body of research at UK and European level which questions any overall gain in jobs resulting from on-shore windfarms⁵¹³. There is also no evidence from existing windfarms in Wales of large scale job creation, local jobs at the construction phase or community benefits acting as an economic driver⁵¹⁴. In the absence of any robust evidence the claims for local job creation must be treated with great circumspection.

⁵¹¹ ALL-SOCIOECO-REBUTTAL-S4-O4 §5.11

⁵¹² ALL-S4-POE-O4 §2.2.2 vi

⁵¹³ ALL-S4-POE-O4 Section 6 and ALL-SOCIOECO-REBUTTAL-S4-O4 and reference doc D

⁵¹⁴ ALL-S4-POI-O4 §6.16 citing Munday et al (Cardiff University 2011) Journal of Rural Studies (Alliance core doc.)

Section 15: Conclusions

- 15.1 You have heard from the community at the Inquiry, at the public meetings, through statements, and through the Alliance.
- 15.2 The Alliance has, we believe, submitted as much grounded evidence that a Section 6 party can be reasonably expected to do with the resources available for a year-long Public Inquiry into six schemes.
- 15.3 The evidence shows that there is no requirement to skew towards targets the proper consideration of all legitimate planning issues in deciding these schemes. Environmental capacity and the concerns of the local people and businesses must be taken fully into consideration.
- 15.4 The population and visitors do not accept the phrase *Within (and immediately adjacent) to the SSAs the implicit objective is to accept landscape change i.e. a significant change in landscape character from wind turbine development*⁵¹⁵ which was never part of the consultation process of TAN 8, and it was inserted afterwards in Annex D. Any requirement for such biasing of the planning system was only to meet targets which in the case of Wales have gone and in the case of UK 2020 targets are met.
- 15.5 Why have members of the public been so inspired to contribute whatever they could to this Inquiry process?

Perhaps these words out of `Caring for Historic Landscapes`⁵¹⁶ sum it up better than we could:

`The contribution of local landscapes to people's quality of life and to the economic well-being of local communities should not be underestimated. Recent research amongst individuals and businesses has clearly shown that one of the main reasons why people invest so much of their time and money in Wales is the quality of the local environment and landscape`.

⁵¹⁵ TAN 8 Annex D § 8.4

⁵¹⁶ Caring for Historic Landscapes CADW 2007 CD-002-007

Section 16: Alliance Inquiry Documents

	Reference ⁵¹⁷	Subject	Witness /speaker	Date
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To Pre Inquiry Meeting

1.	ALL-001-001	Comments on location & PI format	Alliance	20 Dec 2012
2.	ALL-OSOC	Outline Statement of Case	Alliance	21 Jan 2013
3.	ALL-002	Alliance Mid Wales Application (Statement for PIM)	Alliance	4 Feb 2013
4.	ALL-003	Skeleton on behalf of the Alliance	Alliance	15 Feb 2013
5.	ALL-004	Speaking Notes for the Alliance's Application	David Smith	18 Feb 2013
6.	ALL-005	PIM letter re topics	Alliance	25 Feb 2013
7.	ALL-006	Alliance re PPS22 guidance para 99 (NB PPS 22 now revoked)	Alliance	27 Feb 2013

Opening Session

8.	ALL-007	Summary Position of the Alliance	Alliance	22 Apr 2013
9.	ALL-008	Statement of Case – Opening Session	David Smith	14 May 2013
10.	ALL-009	TAN 8 Gestation Consultation and Application	Alliance ⁵¹⁸	14 May 2013

⁵¹⁷ The main reference given is that shown on the relevant document. After Session 1 (SSA C) the Inquiry reference system was altered and that alternative different reference is shown in a smaller font

⁵¹⁸ Prepared in accordance with the guidance in ID/6 of 10 April 2013

	Reference	Subject	Witness /speaker	Date
11.	ALL-010	WAG Energy Policy Target TAN 8 and PPW	Alliance ⁵¹⁸	14 May 2013
12.	ALL-011 ⁵¹⁹	Alliance Reference Documents	Alliance	14 May 2013
13.	ALL-012	Alliance Opening Statement	David Smith	4 Jun 2013

Session 1 – SSA C

14.	ALL-SOC-SSA-C	Statement of Case – SSA C	Alliance	9 Jul 2013
15.	ALL-SOC-SSA-C-DOCLIST	Alliance Reference Documents Session 1	Alliance	
16.	ALL-SSAC-POE-01	Individual and Group Statements p1-96	Various	6 Aug 2013
17.	ALL-SSAC-POE-02	Hydrology	Dr Harvey Rodda	6 Aug 2013
18.	ALL-SSAC-POE-03	Overall Need	Dr John Constable	6 Aug 2013
19.	ALL-SSAC-POE-04	Landscape	Dominic Watkins	6 Aug 2013
20.	ALL-SSAC-POE-05 and appendix	Cultural Heritage	Brett Kibble	6 Aug 2013
21.	ALL-SSAC-POE-06	Local Transport Issues	Roger Durgan	6 Aug 2013
22.	ALL-SSAC-POE-07	Community Profiles	Steve Wood	6 Aug 2013
23.	ALL-014	Swept area of blades	Charles Green	4 Oct 2013

⁵¹⁹ Discs containing the reference documents listed in ALL-011 have been supplied to the Inspector, main parties and the Inquiry library

	Reference	Subject	Witness /speaker	Date
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Session 2 – SSA B

24.	ALL-SOC-SSA-B	Statement of Case – SSA B	Alliance	10 Sep 2013
25.	ALL-SOC-SSA-B-DOCLIST	Alliance Reference Documents Session 2	Alliance	
26.	ALL-SSAB-POE-01R ALL-GENERAL-POE-SSA-B-01	Individual and Group Statements p1-93	Various	8 Oct 2013
27.	ALL-SSAB-POE-02 ALL-NEED-POE-SSA-B-02	Overall Need	Dr John Constable	8 Oct 2013
28.	ALL-SSAB-POE-03 ALL-LAND-POE-WATKINS-SSA-B-03	Landscape	Dominic Watkins	8 Oct 2013
29.	ALL-SSAB-POE-04 ALL-COMMUNITY-POE-SSA-B-04	Community surveys	Steve Wood	8 Oct 2013
30.	ALL-SSAB-POE-05 ALL-PEAT-POE-SSA-B-05	Effects on Peat	Brett Kibble	8 Oct 2013
31.	ALL-SSAB-POE-06	Cultural Heritage (amended)	Brett Kibble	8 Oct 2013
32.	ALL-SSAB-POE-07 ALL-TRANS-POE-DURGAN-SSA-B-05	Local Transport Issues	Roger Durgan	15 Oct 2013
33.	ALL-SSAB-SPOE-07	Summary Proof and Comments on (Kevin Martin) Rebuttal	Roger Durgan	18 Nov 2013
34.	ALL-015	Restoration of degraded blanket bog	Alliance	18 Nov 2013
35.	ALL-016	Hearing Session - Ecology and Wildlife - Comments	Alison Davies	2 Dec 2013

	Reference	Subject	Witness /speaker	Date
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Session 3 – Llandinam 132kV line

36.	ALL-SOC-Session 3 ALL-SOC-OHL	Statement of Case – Session 3	Alliance	26 Nov 2013
37.	ALL-SOC-OHL-DOCLIST	Alliance Reference Documents Session 3	Alliance	
38.	ALL-OHL-POE-01 ALL-NEED-POE-OHL-01	Consultation Need and Design	Richard Bonfield	24 Dec 2013
39.	ALL-OHL-SPOE-01 ALL-NEED-SPOE-01	Summary - Consultation Need and Design	Richard Bonfield	21 Jan 2014
40.	ALL-OHL-POE-02 ALL-LAND-POE-OHL-02	Landscape	Dominic Watkins	24 Dec 2013
41.	ALL-OHL-POE-03 ALL-CULTHER-POE-OHL-03	Cultural Heritage	Brett Kibble	24 Dec 2013
42.	ALL-OHL-POE-04 ALL-ECOLOGY-POE-OHL	Woodlands and Ecology	Michele Lloyd	24 Dec 2013
43.	ALL-OHL-POE-05 ALL-CONSTRUCTION-POE-OHL-05	Construction Traffic	Geoff Weller	24 Dec 2013
44.	ALL-OHL-POE-06 ALL-DECOMMISSION-POE-OHL-06	Decommissioning	Richard Bonfield	24 Dec 2013
45.	ALL-OHL-POE-07 ALL-GENERAL-POE-OHL-07	Individual Statements pages 1-29	Various	24 Dec 2013
46.	ALL-017	Letter from SPM to Messrs GB & TDB Jones 20 Dec 13	Richard Bonfield	24 Jan 2014

	Reference	Subject	Witness /speaker	Date
47.	ALL-018	Photo of Two Tumps Dyke, Kerry Hills	Brett Kibble	20 Feb 2014
48.	ALL-019	Glanmiheli Pond Clarification	Michele Lloyd	20 Feb 2014
49.	ALL-020	Replacement programme for trees to be felled	Michele Lloyd	15 Jan 2014

Session 4 – Cumulative Effects / Matters in Common

50.	ALL-SOC-S4	Statement of Case – Session 4		28 Jan 2014
51.	ALL-SOC-S4-DOCLIST	Alliance Reference Documents Session 4	Alliance	
52.	ALL-S4-POE-01 ALL-GRID-POE-S4-01	Grid Connections and Transmission	Brett Kibble	25 Feb 2014
53.	ALL-S4-POE-02 ALL-LAND-POE-S4-02	Landscape	Dominic Watkins	25 Feb 2014
54.	ALL-S4-POE-03 ALL-COMMUNITY-POE-S4-03	Community Consultation	Alison Davies	25 Feb 2014
55.	ALL-S4-POE-04 ALL-SOCIOECO-POE-S4-04	Tourism and the Economy	Jill Kibble	25 Feb 2014
56.	ALL-SOCIOECO-REBUTTAL-S4-04	Tourism and the Economy Note on rebuttal by David Stewart	Jill Kibble	1 Apr 2014
57.	ALL-S4-POE-04-ADDENDUM ALL-SOCIOECO-POE-S4-04-ADDENDUM	Tourism and the Economy Note on Regeneris Report	Jill Kibble	14 May 2014
58.	ALL-S4-POE-05 ALL-TRANS-POE-S4-05	Overall Transport Issues	Roger Durgan	25 Feb 2014

	Reference	Subject	Witness /speaker	Date
59.	ALL-S4-POE-05a ALL-TRANS-POE-ADD-S4-05	Construction Traffic including non-ALLs	Roger Durgan	10 Mar 2014
60.	ALL-S4-POE-06 ALL-ECOLOGY-POE-S4-06	Wildlife and Ecology	Alison Davies	25 Feb 2014
61.	ALL-S4-POE-07 ALL-HEALTH-POE-S4-07	Noise and Health	Dr Sarah Myhill	25 Feb 2014
62.	ALL-S4-POE-08 ALL-GENERAL-POE-S4-08	Individual and Group Statements p1-114	Various	25 Feb 2014
63.	ALL-NOISE-NOTE-S4	Note on Amplitude Modulation	Geoff Weller	1 Apr 2014
64.	ALL-NOISE-NOTE-S4- ADDENDUM	Note on Amplitude Modulation - Addendum	Geoff Weller	11 May 2014

Closing Session

65.	ALL-CLO-POE-01	Planning Balance	Dr John Constable	6 May 2014
66.	ALL-CLO-POE-02	Planning Balance and Carbon Balance	Brett Kibble	6 May 2014
67.	ALL-CLO-DOCLIST	Alliance Reference Documents Closing Session	Alliance	
68.	ALL-CLO-POE-01-Response	Response to Mr Frampton's Rebuttal	Dr John Constable	19 May 2014
69.	COND-ALL-NOISE	Comments on Amplitude Modulation Conditions	Geoff Weller	12 May 214
70.	COND-ALL-TRSN	Comments on Further Transport Conditions	Roger Durgan	12 May 214
71.	ALL-021	Response to CPL's note about fire hazard	Alliance	28 May 2014

	Reference	Subject	Witness /speaker	Date
72.	ALL-022	Response to FWL's Updated Protected Species Survey Report May 2014	Alison Davies	29 May 2014
73.	ALL-023 to -029	Not used		
74.	ALL-030R	Closing Submissions	Alliance	28 May 2014