

## Conclusions

146. Bearing in mind the submissions and representations reported and having regard to the environmental information and the likely environmental effects of the proposed developments, I have reached the following conclusions. The numbers in square brackets indicate the relevant source paragraphs of the report and those with a letter prefix indicate the relevant annex or document. The cases put to the Inquiry by the parties took account of the reduction of the proposed scale of the wind farm from 23 to

17 turbines. Given my recommendation that it would be appropriate for Appeal A to be considered in the light of the reduced scheme I have assessed the appeal on that basis. [2-4, A5-8]

### *Main Considerations*

147. I consider the main issues with regard to the wind farm appeal to be:

- The policy context and whether the proposal in combination with other developments would exceed the WG capacity limit for the Strategic Search Area;
- The effect of the development on:
  - the landscape character of the area;
  - visual amenity;
  - setting of Scheduled Ancient Monuments and Listed Buildings;
  - noise;
  - health;
  - ecology;
  - tourism; and
  - living conditions of neighbouring residential occupiers with regard to the internal access track, increased traffic on the local highway network, private water supplies and shadow flicker,

148. In respect of the access route appeal, I consider the main issues to be:

- The effect of the development on the free and safe flow of traffic on the public highway; and
- Ecology and the Habitats and Species Regulations 2010

### *Appeal A*

#### *Policy Context and SSA capacity*

149. WG is committed to delivering renewable energy as part of its objective of combating climate change and achieving the targets for renewable energy which are reflective of the UK's international obligations. Its aim is to secure an appropriate mix of energy provision which maximises benefits to the economy and communities, whilst minimising potential environmental and social impacts<sup>41</sup>. Wind energy is recognised as offering the greatest potential in the short to medium term for delivering renewable energy and is a key part of meeting WG's vision for future renewable electricity production as set out in the Energy Policy Statement (2010) and should be taken into account when determining applications. However WG accepts "that the introduction of

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<sup>41</sup> PPW 7 Paragraph 12.8.6

*new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact*<sup>42</sup>. [20, 47, A26-30, B4-5]

150. TAN 8 considers the identified SSAs to be the most appropriate locations for large scale wind development. PPW 7 in paragraph 12.8.13 states that the development of a limited number of large scale (over 25MW) wind energy developments in these areas will be required to contribute significantly to WG's on shore wind energy aspiration for 2GW in total capacity by 2015/17, UK and European renewable energy targets, to mitigate climate change, and deliver energy security.[35, 47, 67, A30, B6-14]
151. The indicative capacity target for SSA C quoted in TAN 8 (Table 1) is 70MW and is stated to represent a one third reduction on the maximum capacities identified by GH as reviewed by Arup in their 2005 report. The GH report considered SSA C to have capacity for 74 turbines producing 148MW but when assumptions as to noise restrictions upon capacity were applied these figures were reduced to 49 turbines with a rated capacity of 98MW, based on 2MW per turbine. The Ministerial letter of July 2011 (the Griffiths letter) expects all decision makers to respect the fact that SSAs have a finite environmental capacity and output should not exceed the maximum levels outlined. For SSA C that maximum level is stated in the letter to be 98MW and it is not my role to challenge the validity of that figure. No mention is made of increasing output in one SSA as a trade-off for other SSAs not achieving their stated maximum or not providing any capacity at all. Nor is any trade-off between other sources of renewable energy suggested. Whether or not the figure would be exceeded in this case is influenced by the following factors: the treatment of turbines outside the SSA boundary; and actual installed capacity. [47, 68, A37-58; B15-25, C11.6-11.7]
152. TAN 8 recognises that the boundaries of the SSAs are at a "broad brush" scale and considers it a matter for local planning authorities to undertake local refinement within each of the SSAs in order to guide and optimise development within them. Neither the Ministerial letter nor TAN 8 gives specific guidance as to what to do with turbines located outside SSA boundaries. On a strict interpretation, it is arguable that, as the finite environmental capacity relates to the defined SSA, any turbines outside the SSA should not be counted. This approach has been supported in other cases<sup>43</sup>. [47, A37-58, B7, C11.4, C11.6]
153. The refinement work advocated by TAN 8 was undertaken by Arup on behalf of PCC and the 2006 study and 2008 review led to the IDCG. Not only was the boundary to SSA C identified in TAN 8 refined but areas within it were ranked and whilst ensuring that sufficient yield capacity was available it did not cap development levels at the capacities given in TAN 8. All 17 proposed turbines would lie within the original boundary of SSA C established in TAN 8 and also within the 2006 refined boundary. With regard to the 2008 Review, only one of the turbines falls outside of the identified boundary, although it is close to it. In this instance there is no robust evidence that the land on which turbines would be located which is outside of the review boundary of the SSA is not suitable for inclusion as part of the proposed wind farm in terms of its

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<sup>42</sup> PPW 7 Paragraph 12.8.12

<sup>43</sup> CD 35b Welsh Ministers Appeal Decision Bryn Llewelyn qA1140739

proximity to the boundary, topography and landscape character. [35,A63, B26-48, C11.5]

154. With regard to ranking, the 2006 study ranked the area within which the appeal site lies ninth out of fifteen and it was considered in the IDCG to be necessary to meet the capacity target set out in TAN 8. The 2008 Review identified 16 units and within these the area of the appeal site was ranked eighth. In view of the status of the IDCG, limited weight can be attached to it. Nevertheless, it does establish that in refining the broad brush boundaries of SSA C set out in TAN 8 the area in which the appeal site is located was considered acceptable for large scale wind farms. [35, A64-84, B45-48]
155. At present a decision on the schemes subject of the MWCI and decisions on other outstanding schemes are yet to be made and it therefore has to be assumed that any or all of the wind farms could go ahead. Of the proposals subject of the MWCI only part of LF is within SSA C, LM and LD would be wholly outside the boundary as defined in TAN 8. In respect of the other outstanding schemes, HL is completely outside the boundary whereas both NG and BG are within. However, a different picture emerges when the location of the schemes is considered in relation to the 2006 refined and 2008 reviewed boundaries. The turbines at NG would fall outside of the 2006 refined boundary as would the southernmost turbines of BG, and a few associated with LF, LM and LD. Although most of the turbines proposed as part of NG would fall within the 2008 reviewed boundary, the southernmost turbines of BG would remain outside as would some of the turbines at LM. Of all the wind farms under consideration it is only the appeal proposal which has consistently fallen within the boundary of SSA C as it has changed over time. [35, A111, B25]
156. Installed capacity will vary depending on the turbine selected but the generating capacity figure given for the 34 turbines comprising the scheme for LM is 102MW, 71MW greater than the existing wind farm it would replace. The proposed generating capacities of the 27 turbines proposed at LD and 17 at LF are 62.1MW and 59.5MW respectively. The total generating capacity of the schemes subject of the MWCI is therefore in excess of 220MW or 190MW if allowance is made for the current capacity of the existing Llandinam P & L wind farm. The other outstanding schemes have a potential generating capacity of 27 MW at HL from 9 turbines, 27MW at NG and 36MW at BG from 9 and 12 turbines respectively. The appeal proposal would contribute 34MW from 17 turbines of 2MW. [A111, B19, B25, C11.2]
157. None of the identified 98MW capacity for SSA C has been consented. With the number of schemes currently under consideration as part of the MWCI and others still before PCC various scenarios were put forward in evidence with regard to the effect that consent for the schemes would make towards the generating capacity of SSA C. It is quite clear that if all the schemes under consideration were consented the capacity would significantly exceed that identified for SSA C. I have restricted my analysis to the schemes which fall within the boundary of SSA C and whilst the cumulative generating capacity of the proposed wind farm together with LF would fall within the capacity target for SSA C, the addition of either NG or BG would result in its exceedence. [35, A111, A112, B19, B25j]
158. Correspondence from WG with regard to the proposed wind farms being considered by the MWCI (ID 18) stated that WG is extremely concerned that the applications



- within SSA C, if approved and taken cumulatively, would result in the maximum capacity for SSA C being exceeded. The letter incorrectly treated LD as being within SSA C. Nevertheless the letter goes on to state that WG could not support applications that, whether individually or cumulatively, would exceed the maximum capacity of a SSA. The letter does not take account of the other schemes, HL, NG and BG which, if allowed, would further increase the generating capacity of SSA C. Whilst the letter does not form WG policy, it gives a clear indication of the expectation that generating capacity within the SSA is not without limits. [A95-99, B23]
159. On its own the indicative generating capacity of the wind farm of 34MW, based on 2MW from each of the 17 turbines, would be within the figures identified for SSA C. PCC has suggested restricting the capacity to 34MW but the final choice of turbine has not yet been made and as models of the dimensions proposed vary in their generating capacity it may be possible that 17 turbines would generate in excess of the estimated 34MW. Although it is anticipated that the turbines would be 2MW a range of 1.8 to 3.5MW has been suggested which would equate to a maximum generating capacity for the scheme of 59MW. This would be within the capacity figure for SSA C and the impact on landscape character and visual amenity would remain the same. It would therefore be unreasonable to limit the capacity of the turbines which, at the time of writing this report, does not exceed the overall generating capacity identified for and available in SSA C. However, it must be remembered that WG is not empowered to give consent for schemes in excess of 50MW. [131, A53]
160. In evidence PCC maintained that it has adopted a strategic approach to the provision of wind farms in SSA C and considers that the finite environmental capacity of SSA C would be met by LM and the northern array of LD. In combination with these two schemes PCC considers it could potentially support the HL scheme. Although this gives a clear indication of the scale of development PCC considers SSA C could support, the generating capacity would exceed the 98MW target set in the Ministerial letter. Moreover, all three of the proposals supported by PCC in the strategic approach lie outside of the TAN 8 boundary of SSA C. Whilst they are predominantly within the refined boundary of 2006 and the reviewed boundary of 2008, these result from the Arup reports that fed into the IDCG which carries limited weight. [35, A85-101, B132-134]
161. Whilst the strategic approach was also adopted by PCC at the MWCI, its status is unclear and it does not appear to have been formally adopted by PCC. Furthermore, if the boundary of SSA C identified in TAN 8 prevails in favour of the refined boundaries in the IDCG, then the capacity of the schemes identified in the strategic approach would make no contribution towards the capacity of SSA C, given their location outside the TAN 8 boundary.
162. In conclusion, the proposal is contained within the boundaries of SSA C as identified in TAN 8 and its potential generating capacity would not exceed the target of 98MW set by WG. However, a favourable decision on the other schemes, particularly LF, NG and BG, could result in the capacity limit for SSA C being exceeded significantly, a situation not supported by WG. In reaching a decision on the appeal regard must therefore be given to any developments consented within SSA C subsequent to this report and the consequences of such consents for WG capacity targets for SSA C.

### *Landscape Character*

163. Within and immediately adjacent to SSAs the implicit stance of TAN 8 is to accept landscape change i.e. a significant change in landscape character from wind turbine development. Nonetheless, TAN 8 also recognises that all of the land within SSAs may not be technically, economically and or environmentally suitable for major wind power proposals. It is necessary to ensure that the development is appropriate for the scale and character of the landscape and there may be a limit on the number or extent of wind farms which can reasonably be accommodated. [36, 47, A120]
164. The appeal site lies outside any national or local designations, the nearest being the Shropshire Hills AONB approximately 3km to the east. Although CUP is of the opinion that the landscape in the immediate vicinity of the appeal site is of a similar quality to the AONB and was proposed to be designated as a Conservation Area by the National Parks Committee in the Hobhouse Report of 1949, it was not designated at that time or subsequently. Whilst the qualities of the area do not abruptly change at the boundary of the AONB, they do alter over distance and this appears to be borne out in the LANDMAP assessment of the area. [A122, C3.2]
165. The site is in LANDMAP visual and sensory aspect area VS122 which is described as *"Upland plateaux and shoulders where areas of intrinsic moorland land cover has been agriculturally improved and converted to grassland, where the large scale regular fields enclosed by fences often look unnatural in association with the remnant semi-natural moorland and wetland vegetation"*. It has an overall evaluation of moderate to low, having been rated low for scenic quality, character and rarity and moderate in respect of its integrity. Wind farm developments are recognised as a major threat to the current integrity and condition of the visual and sensory features of the area. Also identified are functional links with VS111 and VS128. The other LANDMAP overall evaluations relevant to the site include outstanding for the geological landscape aspect, high for the cultural landscape, moderate for the historic landscape and moderate/low for the landscape habitats. [A123, A127, A129]
166. The proposed revision of the boundaries of VS122 by the inclusion of land currently within VS110 has been noted. It affects the area adjoining the southern boundary of the appeal site and although according to the correspondence from NRW this revision is imminent, I do not consider that it would have any major bearing on the case. [120]
167. The openness of the area allows extensive views and whilst LANDMAP records that there are attractive views out of aspect area VS122 towards the Kerry Hills and into smaller valleys, detractive views out are also recorded as being *"up from the valleys to rather bland hills"*. It is noted as being *"unattractive and exposed"* in respect of its perceptual and other sensory properties. VS110 is noted for its attractive views both in and out which are generally attractive long views to surrounding rural areas and seen as skylines from adjacent farmland. Its qualities are noted as attractive, tranquil, exposed, remote, wild and spiritual. VS128 is noted as having few views in and its qualities are recorded as attractive, tranquil, sheltered, settled, and spiritual. Neither VS110 nor VS128, which both have an overall evaluation of high, are recorded as having detractive views in or out and no significant threats to the current integrity and condition of the areas are known. No functional links are recorded in respect of VS110 and those with VS122 are recognised in respect of VS128. [A135]

168. Aspect area VS111 lies to the north of VS128 and further north is VS254. Both of these aspect areas are evaluated as high and they have similar qualities to VS110. Moreover VS111 is recorded as having attractive views in and out to the north and VS254 having broad dramatic views to upland to the south. Neither have detractive views in or out. Functional links are recorded with VS122 in the case of VS111
169. In its assessment of the landscape PCC has considered a wider area than that of LANDMAP VS122 by amalgamating the appeal site and VS122 into a wider area including parts of VS110, VS111, VS128 and VS254. A similar approach was taken by PCC in its Landscape Area Study (PCCLCA) where LANDMAP VS122 and VS110 were merged to form LCA R11. Whilst this is accepted practice in LANDMAP Guidance Note 3, the Note advises that where coarser landscape character areas or types have been derived they may need to be split down into smaller areas to ensure appropriate scale for assessment informed by LANDMAP aspect areas. In instances where no LCAs have been defined and assessors wish to use these as the primary basis for reporting, all five LANDMAP aspects should be used for deriving them. I am not satisfied that the approach taken by PCC fulfils these requirements and I am concerned that it may exaggerate the assessed impact of the appeal proposal. [A130-132, A135-139, B62-63, C3.3]
170. There is a large measure of agreement between RES and PCC in respect of the impact of the development on landscape character, as set out in the Landscape and Visual Effects SoCG. It was agreed that there would be significant adverse effects up to 5km from the wind farm within Wales where much of the effects would occur in areas which are within or adjacent to the boundary of SSA C. In common with any wind farm, the proposal would have a significant impact on the landscape character of the appeal site and its immediate surroundings. However, there is an implicit objective in TAN 8 to accept a significant change in landscape character from wind turbine development within and immediately adjacent to SSAs. Moreover, the area has been rated in LANDMAP as low for scenic quality and character and whilst the proposed development would introduce new vertical man-made structures into a rural and open landscape, the wider area is already characterised by sporadic single turbines and the existing wind farm at Llandinam. Furthermore the turbines would be concentrated in a relatively small part of the site where the undulating topography and blocks of tree planting would provide an element of screening of the lower sections of the turbines and the associated infrastructure. Although the development would cause significant adverse effects to the landscape, it would not be unacceptable in this instance given the limitation of the identified harm to a relatively small area within SSA C. [37, 48, A141-143, B55-56, C3.1, C3.6, C3.12, C3.13]
171. To the east of the wind farm and into England RES considers there would be significant adverse effects on the character of the landscape up to 6km which includes part of the Shropshire Hills AONB. PCC on the other hand considers the effects would be significant up to 7km from the site, although the extent of the effect beyond 5km would be substantially limited by intervening topography and vegetation. [37, 48, A143-144, B60]
172. The AONB Management Plan 2014-2019 is a material consideration in the determination of the appeal. It recognises that proposals for wind farms outside the



AONB, including in Powys, could affect the AONB and that large scale developments close to the AONB that could have a significant effect on it would not be acceptable. It goes on to state that land within 5km of the AONB boundary is unsuitable for large scale wind farm development and should be excluded from any search areas. The boundary of SSA C, whether it be the TAN 8 boundary or the reviewed boundary, is within 5km of the AONB. [A145-148, B65-67 C3.4]

173. However development within relatively close proximity to a nationally dedicated area may not be unsuitable, although as stated in section 5.9.12 of the Overarching National Policy Statement for Energy (EN-1), *"The duty to have regard to the purposes of nationally dedicated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation"*. It goes on to state in Section 5.9.13 that *"The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent"*. [A148]
174. The proximity of the AONB to SSA C was taken into account in TAN 8 and the refinement exercises undertaken on behalf of PCC. Indeed the review excluded areas from the steep eastern slopes as it was considered wind development in this location would dominate the scale of the slopes and be visible from settlements and roads located in the AONB
175. The turbines would be visible in middle distance views from more open and elevated locations within the AONB. RES considers that this would extend approximately 3km into the AONB and affect less than 12 sq km or less than 1.5% of the AONB. PCC considers the effect would extend to up to 12km from the site, approximately double that identified by RES. However, none of the physical or perceptual key characteristics of the landscape within the AONB would be changed. Although there is potential for the development to impact on the elevated and panoramic views from locations within the AONB and on the perception of tranquillity this would be no more than would be expected as a result of the identification of a SSA in relatively close proximity to a dedicated area. On this basis although the development would have an adverse effect on the landscape character, in this instance I do not consider that this would be unacceptable. [37, 48, 125, 127, A143-144, B66-70, C3.11]
176. However, the conclusion I have reached is based on the effect of the wind farm on landscape character in isolation. If other wind farms currently under consideration were to be constructed, the cumulative effect of the appeal proposal and the other possible developments on landscape character would be intensified.
177. Of the schemes under consideration as part of the MWCI only LF would be seen in close proximity to the appeal scheme, the remainder being some distance away and further from the AONB. The significant adverse impact on landscape character which would result from the appeal proposal in isolation would be increased by the proximity of the turbines proposed as part of the LF wind farm but I do not consider that this would tip the balance to render the proposals in combination unacceptable. I also consider that the distance between these schemes and those in the western part of SSA C subject of the MWCI would be sufficient to ensure the impact on landscape character remains at an acceptable level, particularly given that the number of turbines

would be less than at present as part of the Llandinam re-powering scheme. [A152, B71-73, C3.16]

178. The adverse effect on landscape character would be intensified further if the schemes at NG and BG also came to fruition. I consider that the additional number of turbines and the extended area they would cover would result in a significant increase in the adverse effect on landscape character already identified. Accordingly my recommendation is based on the current position that neither of these other schemes is committed. [A152, B71-75, C3.16]
179. I therefore conclude that the proposed wind farm in isolation, whilst causing a significant adverse effect on landscape character would, given its location within SSA C, accord with Policies E3, SP12, ENV2 and GP1 of the UDP, TAN 8 PPW and EN-1. However, there is the potential that the proposal in combination with others currently under consideration would result in a significant adverse effect on landscape character which would be of an unacceptable level. Regard will therefore have to be given to the status of the other schemes under consideration at the time of a decision.
180. In refusing permission PCC also had regard to the effect of the proposed grid connections on landscape character. Whilst this matter is not for consideration as part of the appeal I note that within the appeal site the connection would be underground. On this basis I consider it would have no effect on landscape character. [A155, C3.12]

#### *Visual Amenity*

181. There is a large measure of agreement between RES and PCC in respect of the impact of the development on visual amenity, as set out in the Landscape and Visual Effects SoCG. It is agreed that the wind farm would result in some significant long term effects on the visual amenity of people on and around the site and from locations up to 10km from it. Significant effects can be seen as positive or negative depending on individual perceptions regarding the merits of wind energy development. However, the site is predominantly within SSA C and the implicit objective in TAN 8 to accept a significant change in landscape character from wind turbine development within and immediately adjacent to SSAs would suggest that a level of harm to visual amenity would also be expected. [38, 48, A151, B57-60]
182. RES is of the opinion that there would be significant effects on the visual amenity of users of a 12km section of Glyndŵrs Way from Beacon Hill through the site to Llanbadarn Fynydd and on a 4km section of the Kerry Ridgeway eastwards from the Cider House on the B4355. PCC consider that a 12km stretch of Glyndŵr's Way and 5km stretch of the Kerry Ridgeway would be significantly affected whereas CUP considers the significant effect on Glyndŵr's Way would extend to 24km. There would also be significant effects on users of the local highway network, other rights of way in the area and the Open Access land to the south of the site. [38, 48, 58, 75, 123, A151, B57, B60, C3.1, C3.8, C3.11]
183. People currently using the local highways and rights of way for recreation and amenity purposes enjoy the perceptual qualities of a relatively remote and tranquil landscape. The proposed turbines would appear as intrusive man-made features which would result in significant harm to visual amenity and although these effects would be



largely reversible, 25 years is a considerable period of time for the effects to be endured. However, views of the turbines from Glyndŵr's Way and the Kerry Ridgeway as well as from other public rights of way, access land and the network of local roads would vary according to direction and speed of travel and intervening topography. Given their height and position in the landscape, the turbines, either wholly or partially, would be visible over a wide area. The most intense effect on visual amenity would be that experienced by receptors following Glyndŵr's Way through the site in close proximity to the turbines. However, the reduction in the number of turbines has reduced the effect this would have on the visual amenity of receptors. The effect from more distant viewpoints, such as on the Kerry Ridgeway and sections of Glyndŵr's Way south of Llanbadarn Fynydd would be more diluted as whilst a greater number of the turbines might be visible, the effect of their scale and moving blades would be less perceptible in the overall panorama. [75, 97,123, A151, B57, C3.1, C3.8, C3.9, C4.5]

184. With regard to the Shropshire Hills AONB, RES considers that there would be significant effects on the elevated and panoramic views from locations within the AONB up to 10km from the appeal site and on the perception of tranquillity arising from the movement of the rotors in closer views. PCC on the other hand considers that the development would result in significant effects on scenic and environmental quality, tranquillity and cultural opportunities for enjoyment of the AONB up to 12km from the turbines and that these effects would undermine the purposes of the AONB. The concerns of PCC are shared by the Shropshire Hills AONB Partnership and CUP raised issue with the effect on outwards views from the AONB. [37, 48, 58, 125-127, A144, B56-57, C3.4]
185. Panoramic views extend across and beyond the AONB and the proposed turbines would be visible in middle distance views from the more open and elevated locations within the western part of the AONB. The introduction of turbines into this upland setting would alter the views from the western part of the AONB, although the turbines of the existing Llandinam P&L wind farm are visible on the distant skyline. Whilst any discernable movement of the rotor blades could have an effect on tranquillity, this would be dependent on the visibility of such movement due to separation distance and weather conditions. The effect of the development on the scenic quality of the views from the AONB and the associated tranquillity would in turn affect the opportunities for enjoyment of the AONB by receptors. The development would have a significant effect on the AONB however this would be restricted to views from elevated locations up to 12km of the site. Moreover, the development would not compromise the ability of the AONB to fulfil its statutory purpose and on this basis the scheme would not offend the need to afford sufficient protection to the AONB. [A144, A153, B56, C3.9-3.11]
186. Residents of properties in the vicinity of the site expressed concern regarding the effect the wind farm would have on their visual amenity. The ES concluded that of the settlements in the vicinity of the site only the visual amenity of the residents of Felindre would be significantly affected by the wind farm. With regard to the properties scattered across the area, in evidence to the Inquiry RES considered that there would be significant changes in some views from ten properties in the vicinity of the site. Based on the Zone of Theoretical Visibility (ZTV), there would be potential views of between 5 and 9 turbines from Cwm-yr-hob and the property to the east of it, Upper Green and Sign; between 9 and 12 turbines from Bryn Mawr Cottage, Killowent,

Llanrhys and Tan y Bryniau; between 13 and 16 turbines from Lower Green; and all 17 turbines from Hope's Castle Farm and Gatehouse. Further wire frames prepared for the accompanied site visit indicated that there was the potential for up to 16 turbines to be seen from Fiddlers Green. [88, A212, C3.13, C4.1, C4.3, C4.5, SEI 5.6.22, RES/KFH/5]

187. Although the outlook from all of the properties with views towards the turbines would be altered, the effect of the turbines on the visual amenity of residents would differ substantially from property to property. From some not only the number of turbines seen would vary but also the visible part of each turbine would vary between its full height down to just the tip of the rotating blade. The extent to which the turbines would be visible would be dependent not only on the separation distance, intervening topography and vegetation but also on whether the turbines were being viewed from within the property or its grounds. In many cases, the views would be filtered to varying degrees by the local terrain and vegetation. Furthermore the distance of the properties from the turbines and the extent of the effect on outlook would be sufficient to ensure that the turbines would not be overbearing or unduly oppressive. I therefore consider that the effect of the development would not be so severe as to cause an unacceptable level of harm to the visual amenity of residents. [112, 114, 116, 119, 121]
188. There would also be variation in the extent to which the turbines subject of the schemes before the MWCI and part of other schemes also under consideration would be seen in conjunction with those proposed as part of the appeal. Turbines which are part of these other schemes would not feature in the outlook from a number of the properties in the area or would be restricted in some cases to as little as the blade tips. The submitted wire frames indicate that from most properties where the appeal proposal would be seen in conjunction with other schemes, the turbines associated with the latter would be fewer in number and may also appear smaller in scale. Although the cumulative effect would be greater on some properties than others, I am satisfied that the effect on the visual amenity of local residents would not be much greater than from the appeal proposal alone. [RES/KFH/5, A152, B71-75, C3.16, C4.3]
189. In refusing permission PCC also had regard to the effect of the proposed grid connections on visual amenity. Whilst the grid connection is not for consideration as part of the appeal I note that within the appeal site the connection would be underground. On this basis I consider it would have no effect on visual amenity. [A155, C3.12]
190. On balance I consider that although the development would have a significant effect on visual amenity on receptors using the rights of way network in the area, given the location of the site within SSA C the level of harm identified is not sufficient to warrant refusal of the appeal. On this basis I conclude that the development would accord with Policies E3 and SP12 of the UDP, TAN 8, PPW and EN-1.

#### *Cultural Heritage*

191. Whilst there are no designated heritage assets within the appeal site boundary, designated sites lie within the surrounding area. The proposal would not have any direct physical effects on any known assets and the potential for significant unknown

buried archaeological material is considered by RES to be low. However, regard has to be had to the effect of the development on the setting of known heritage assets which is defined by Cadw as "*The surroundings in which an historic asset is experienced, its local context, embracing present and past relationships to the adjacent landscape*"<sup>44</sup>.

192. The character of the area has changed over time and although the assets remain in an open rural landscape, the land has been agriculturally improved and enclosed and there is evidence of modern civilisation and development. The landscape is very different from when the assets were constructed and as a consequence their settings have altered over time. The contribution that setting makes to the significance of an asset does not depend on there being public rights or an ability to access or experience that setting. Nevertheless, proper evaluation of the effect of change within the setting of a heritage asset will usually need to consider the implications, if any, for public appreciation of its significance. In assessing the development I have had regard to the evidence given during the Inquiry in respect of the stance taken by PCC on its definition of less than substantial harm and the effect of this on the conclusions it had drawn over impact. [A162-166, A171-2, B90]
193. A rough alignment of Bronze Age barrows has been recognised which stretches in a band from Rhiw Porthnant (SAM RD084) in the north east to Warren Hill (SAM RD105) in the south west. In the intervening landscape other identified barrows include Cwm Rhos Goch Barrow (ND 9), Coventry Round Barrow (SAM RD103), Ty'n y Ddol Hill Barrow (SAM RD252) and Cae Glas Barrow Cemetery (SAM RD104). The distance between the barrows and the nearest turbines varies between approximately 2.5km at Rhiw Porthnant and 0.31km at Coventry Round Barrow. Cae Glas, Ty'n y Ddol and Cwm Rhos Goch would be within 1km of the nearest turbine and Warren Hill would be approximately 1km distant. [39, A177, A181, B83, B93, C5.3]
194. The precise purpose of the barrows is unclear and there are several conjectures as to the reason behind their locations. Although outward views are possible from the barrows, the heritage significance of such isolated upland barrows is dependent on inward views and generally over limited distances. Nevertheless several of the barrows lie relatively close to the boundary of the appeal site and the area within which the turbines would be sited. Consequently the turbines would be visible in inward views and could have a distracting effect due not only to their size but also to the movement of the rotors and the noise this would generate. [A181]
195. The proposed layout of the wind farm has taken account of the siting of these heritage assets and whilst the turbines would be in relatively close proximity to some, the sightline along the alignment of the barrows would be preserved and a buffer would exist between it and the edge of the area in which the turbines would be sited. Nevertheless the turbines would feature in views between the sites and as they would be far greater in vertical scale than the assets the turbines would cause an element of visual intrusion in the setting of the assets. The degree of harm would vary and whilst the effect on most of the assets would be less than substantial, I consider the harmful

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<sup>44</sup> Conservation Principles: (Policies and Guidance) for the Sustainable Management of the Historic Environment in Wales, Cadw 2011

effect would be greater in respect of Coventry Round Barrow and Ty'n y Ddol Hill Barrow. [61, A181-185, B93-97, C5.2-5.4]

196. Coventry Round Barrow is locally prominent in an area of open land and close to a public footpath. The barrow has extensive views in all directions and there is intervisibility with other monuments in the area, including Warren Hill. The nearest turbine would be sited approximately 400m to the east and all the turbines would be visible in views stretching from the north round to the south east. Ty'n y Ddol Hill Barrow lies to the south east of Coventry Barrow but it is not locally prominent due to bracken cover. Although it occupies slightly lower ground than Coventry Barrow its setting is open with views in almost all directions with some intervisibility. The turbines would feature in views from the north west round to the south east, the nearest turbine being within approximately 400m to the east. The development would make notable changes to the current open and rural setting of these barrows and given the overwhelming dominance of the turbines I consider that this would result in substantial harm to the setting of both monuments. [C5.3]
197. Windy Hill Barrow (SAM RD251) is situated approximately 3.2km to the north west of the turbines and all the turbines would be visible to some degree from the barrow. In the proposed layout of the turbines the structures would intercept the sightline between Windy Hill Barrow and the barrows on Warren Hill and Beacon Hill to the south east. The development would alter the currently open and uncluttered rural landscape and consequently affect the setting of the monument and its relationship with other assets. Nevertheless, given the separation distance, I consider that this would only cause moderate harm.
198. The two barrows at Gors Lydan (SAM RD106) lie approximately 2.3km to the south west of the turbines. Their location on the summit of one of the higher peaks in the landscape ensures that they are not only visible from a distance but have commanding views over the surrounding area. Inward views from the north would change the rural context of the setting of these barrows although I consider that the distracting effect of these relatively distant turbines would not cause material harm to their setting.
199. Castell y Blaidd (SAM RD102) is a significant horseshoe shaped bank and ditch earthwork enclosure sited approximately 0.5km west of the appeal site boundary and the nearest turbine. The monument does not stand on the highest topographic point in this rural setting and therefore the main outward views are away from the wind farm to the west and south. Nevertheless, the close proximity of the turbines would have a dominating effect which would have a substantial adverse effect on the setting of Castell y Blaidd. There is evidence of damage to the SAM and RES has proposed a package of works which in addition to repairs would offer access, interpretation and improvement of information and management base. However, this would not offset the harm identified. [40, 138, A186-188, B93-98, C5.5, C5.7]
200. Removal of trees from Cae Glas Barrow cemetery has also been proposed. The harm from the development has been identified as being less than substantial and it is considered that the proposed removal of the trees would do little to alter this conclusion. [138]



201. To the south west of Castell y Blaidd and approximately 0.9km from the nearest turbine lies Castell y Blaidd Medieval Settlement (SAM RD155) which comprises low earthwork remains in an area of grazing. Although there is intervisibility with Castell y Blaidd, any functional relationship between the two is not confirmed. Several of the proposed turbines would be visible from the SAM and would be seen in the context of Castell y Blaidd. Increased distance from the appeal site would reduce the dominance of the turbines in comparison with Castell y Blaidd, but they would be a dominant feature. However, views of the monument from one of the local footpaths or Castell y Blaidd if public access is secured would generally be away from the wind farm and the distracting effect of the turbines would not be as significant. On balance I consider that the proposal would have less than substantial harm on this SAM. [B93, C5.5].
202. Fron Top Deserted Rural Settlement (SAM RD173) lies to the south of Castell y Blaidd Settlement and is similar in that it also comprises of low earthwork remains in an area of grazing, but it is close to a minor road. The turbines at a distance of approximately 1.2km would feature strongly in the views from the monument and would alter the rural character of the area. However, I do not consider that the effect on the setting of the SAM would be overwhelming which leads me to conclude that there would be less than substantial harm. [B93, C5.5]
203. The two LBs at Cwm Yr Hob Farm consist of the former house with attached farm range and a detached barn. Both buildings are Grade II, having been listed in 2004. The LBs are in a state of disrepair and whilst the house has not been occupied since a replacement was built in the late 1960's, the farm buildings are still in use. The house and attached building was listed for its special architectural interest as a traditional farmhouse and cow house retaining early 19<sup>th</sup> century character and detail, with earlier origins, and, with the barn, as part of a group retaining strong vernacular character. [40, A189, B107]
204. The LBs are situated within a small steep sided valley and are approached from the east along the valley with the hills framed above it. A public footpath passes through the site. There was agreement that the setting of the LBs comprises the agricultural land on the hillsides around the buildings as this land contributes to the heritage significance of the assets, with a visible link between the continuing use of the buildings and the active farm. The nearest turbine would be approximately 0.79km from Cwm Yr Hob and varying amounts of up to seven turbines would be visible from the public footpath to the south of the barn and also from the approach to the buildings from the east and the area to the rear of the house and potentially from within the house itself. However, from the front of the house views of the turbines would be screened by the buildings. [A190, B93]
205. The turbines would alter the rural setting of the LBs and although they would appear prominent in the landscape, their dominance would be lessened by the local topography. RES and PCC are in agreement that whilst the development would alter the setting of the building, less than substantial harm would occur. There is nothing in the evidence to persuade me otherwise. Nevertheless as there would be an impact on a LB it is necessary to give considerable weight to this issue under the statutory duty imposed by Section 66 of the Planning (Listed Buildings & Conservation Areas) Act



1990 and the harm to setting would require special regard in the planning balance. [53, A164, A190-191, B93, B97, B107-109]

206. RES proposed as part of the SEI a package of measures to make the LBs safe through necessary repair and refurbishment and bringing the house back into proper use. These proposals were scaled down during the Inquiry to a level of making the buildings safe. RES consider that the modest harm to the LBs from the proposed development would be outweighed by the benefit brought about by the proposed works to the LBs whereas PCC consider the works would not remove the harm. Whilst the works proposed by RES would make the LBs safe for the duration of the development and therefore would be of some benefit to the LBs, it would not remove or lessen the harm identified to their setting. Moreover, these works would require separate consents and there is no certainty that they could be delivered. [138, A192, B97-98, C5.7]
207. I note the lack of objection from Cadw and the Clwyd Powys Archaeological Trust and I consider that the development would cause less than substantial harm to most of the SAMs and LBs in the immediate vicinity of the appeal site. However, I have identified substantial harm from the appeal proposal to the setting of three SAMs Castell y Blaidd, Coventry Barrow and Ty'n y Ddöll Barrow, such that the development conflicts with Policies E3, SP3, SP12 and ENV17 of the UDP, TAN 8, PPW and EN-1.
208. Given the number of assets and the extent of the harm PCC has suggested it would be appropriate to consider the impacts on the historic environment in the round. PCC contend that the proposed wind farm would not harm individual unrelated assets but would harm related groups of assets, namely an extensive ensemble of interrelated prehistoric barrows and also a smaller group of medieval/early post medieval rural remains around Castell y Blaidd and Fron Top. In support of this stance reference has been made to the recent Asfordby decision where it is stated that "*while the Secretary of State accepts that each of these assets may well suffer from less than substantial harm if considered separately as being the only asset of any significance, he takes the view that, looking at the sum total of the impact on so many and varied assets, the harm caused is arguably greater than the sum of its parts.*" However, the decision goes on to state "*Overall, therefore, and having regard to the need to weigh this against the public benefits of the appeal scheme...the Secretary of State takes the view that, in his overall balancing exercise, the Inspector has placed less weight than appropriate on the harm caused to the significance of these heritage assets*". It is the weight applied by the Inspector to the harm to each of the heritage assets with which the Secretary of State disagreed not the approach taken. [50, A156-160, A163, A 195, B79, B102, B110-118]
209. In refusing planning permission PCC also cited cumulative impact and in evidence had regard to the three other wind farms currently under consideration in the eastern part of SSA C, namely LF, NG and BG. Given the location of these wind farms in relation to the heritage assets scattered throughout the area it is inevitable that the effect from the appeal proposal on the setting of the monuments would be heightened if further turbines were introduced into the landscape. The degree to which this would occur and the monuments affected would depend on the status of the other schemes at the time a decision is reached on the appeal proposal. However, with regard to the

monuments I have identified as being potentially subject to substantial harm any additional effects on their setting would come from LF and BG with NG potentially affecting intervisibility with monuments in the north.

210. Comparison has been made between the sensitivity in cultural heritage terms of the eastern part of SSA C and that of the western part on which the Council's strategic approach is based. Whilst the basis for the comparison appears to be quite crude, any potential difference in the sensitivity between the two areas has no bearing on whether or not the development would be acceptable. [A161, A175, A178, B87]

#### *Noise*

211. PCC did not cite noise as a reason for refusing planning permission but it has raised concerns regarding the potential cumulative noise impact should both the appeal proposal and LF wind farm be consented and operational. The cumulative noise impact assessment shows that the proposed wind farm and LF could operate together. However, if the noise conditions agreed at the MWCI were to be imposed on LF wind farm then the suggested noise conditions in respect of the appeal proposal would numerically exceed the upper ETSU-R-97. PCC agrees that the upper ETSU limit is the correct limit to apply in SSA C. [41, 91, A198-202, B121, C4.9]
212. The upper ETSU limit would be exceeded by 0.4 decibels at 7 properties located between the turbines of the appeal proposal and those proposed as part of LF wind farm. Of these properties Garn and Springfield (Blaen-nant-du) would be dominated by noise from the LF wind farm and not the appeal proposal due to their location. The remaining Fiddlers Green and Gwenlas properties together with Cwm-Mawr would only be affected if the properties were subjected to the maximum noise from each wind farm at the same time. However, as the properties would lie in the area between the eastern boundary of LF and the western boundary of the appeal site they would not be downwind of the two wind farms at the same time. As maximum noise would only arise when a property is downwind of the wind farm the properties would not be subject to the maximum permitted noise from each wind farm at the same time. In practice the properties could not be subject to the maximum permitted noise from each wind farm contemporaneously. [A202]
213. ETSU guidance gives indicative noise levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development. PCC is of the opinion that ETSU does not afford a high level of protection and therefore its application should be absolute and that any increase over this tolerance would be unacceptable. [A203, C4.9, C4.10]
214. The Good Practice Guide published by the Institute of Acoustics (IOA) considers that if an existing wind farm has permission to generate levels up to ETSU limits, noise limits at any future neighbouring wind farm would have to be at least 10db lower than the limits set for the existing wind farm to ensure that there is no potential for cumulative noise impacts to breach ETSU limits. This approach could be unduly restrictive and a recent appeal on the grounds that such a condition was too onerous was successful. Nevertheless, if the suggested noise limits for both wind farms were to be added together the result would be an increase of 0.4db. The IOA Guide appears to be accepting an increase of 0.4db above ETSU limits. It also corresponds to the

increase calculated for the cumulative noise from the appeal proposal and the LF wind farm. [92, 93, A204-205]

215. RES considered the controlling property method, an additional approach advocated in the IOA Guide, which produced acceptable results. RES also went on to look at the worst possible noise outcome for each property from each turbine at each wind speed using all the possible turbines currently on the market. When the proposed noise limits for the appeal proposal were applied to the worst case outcome for LF the cumulative noise would be below the ETSU limits in almost all cases. There were only three instances where the resultant levels would be at the ETSU limits, these being Fiddlers Green at wind speeds of 8 and 9 m/s and Gwenlas at 7m/s. The results therefore indicate that there would be no exceedence of the ETSU limits. Moreover the calculations are based on the assumption that the properties would be downwind of both wind farms at the same time, a situation which would not arise. [A202, A207]
216. Noise and amplitude modulation are of concern to local residents and an increase in reported significant problems from existing wind farms was referred to by CUP. Although concern was expressed about the noise measurements and modelling techniques, the evidence confirms that on its own the appeal proposal would not exceed ETSU limits and PCC has raised no objection in this respect. With regard to the cumulative effect, several methods were employed by RES to calculate the effect on the identified properties likely to be affected. Cumulatively the appeal scheme and LF wind farm would exceed ETSU limits by 0.4 dB, an increase which PCC agreed would not be perceptible and constituted only a theoretical potential breach. [83, 87,94, 107, A 209, A213, B121, C4.1, C4.8-4.10]
217. RES has confirmed that the model of turbine has not been finalised and that there are several available which would fit the proposed dimensions which have generating capacities which range from 1.8 and 3.5MW. However, the model selection would have to take account of and adhere to the noise emissions levels set by condition. The unacceptable length of time for residents to obtain satisfactory redress where noise nuisance occurs was raised and some residents felt permanent noise monitoring within dwellings should be a requirement of the development. In view of the evidence with regard to the anticipated noise emissions and the noise levels set by the conditions I consider it would be unreasonable to require the developer to comply with this request. [130, 140, 141, A210, C4.12-4.13]
218. On the evidence before me I conclude that the proposed wind farm in isolation would not exceed ETSU limits and in combination with LF wind farm could exceed that limit by 0.4 dB. The expert witnesses were agreed that this level of increase would not be perceptible and is based on a worst case scenario where the affected properties would have to be downwind of both wind farms at the same time. Proposals for other wind farms, BG and NG, in the vicinity of the appeal scheme could also have implications for cumulative noise levels in SSA C. However, I do not have the necessary evidence to reach a conclusion on this and it would need to be addressed as part of the consideration of those proposals.

### *Ecology*

219. Following the submission of additional information NRW confirmed prior to the Inquiry that it had no ecological objections to the proposed development. PCC also withdrew its objections on these grounds and presented no evidence to the Inquiry on this matter. [9, 11, A216]
220. However, CUP and local residents maintained their objections on the grounds that as a result of developments such as the proposed wind farm the countryside is changing and as a consequence the natural environment and the habitats of the local wildlife will be affected. CUP has made specific reference to the effect the development would have on great crested newts, curlews and bats. Whilst great crested newts and bats are protected species, curlews are listed as being birds that are globally threatened or have undergone a rapid decline in population. [64, 114, C10.1-10.9]
221. The ES and SEI's in assessing the potential ecological effects of the proposed wind farm took account of the presence of all three species on the site and addressed the effect the development would have on them directly and on their habitats. NRW has accepted the contents of the reports and conditions are suggested with regard to the timing and management of the development and monitoring of the works in the interests of the biodiversity of the site. Whilst the biodiversity of the site would be affected by the development, I am satisfied that measures would be in place to ensure that such changes would be within acceptable limits and that there would be no harm in terms of the favourable conservation status of the species concerned and their habitats, in accord with Policies E3, SP12, ENV3 and ENV7 of the UDP.

#### *Tourism*

222. The Council made no case with regard to the effect of the development on tourism. However it was a matter raised by CUP and some of the interested parties who gave evidence.
223. The local landscape is an important element in attracting visitors to the area and the ES recognises that the main tourist activities are walking, horse riding and cycling. The public rights of way which exist on the site and in the surrounding areas facilitate access. Glyndŵr's Way passes through the site and views towards the site are available from the Kerry Ridgeway and the Shropshire Hills AONB. There are also areas of Open Access land close to the site. [62, 71, 113, 114, A219]
224. Altering the open, quiet rural landscape to an upland wind farm landscape would significantly alter the experiences of those visiting the area and would potentially have an impact on local businesses reliant on tourism as evidenced by Mrs Brock and the facilities she provides for equestrians on holiday in the area. [62, 97-99, 113, C6.1, C6.5, C6.7, C6.11, C6.13, C6.14, C6.17]
225. The change to the landscape brought about by the wind farm might put people off visiting the area, or indeed local residents may choose not to use the various routes available to them. With regard to equestrians, although any horse, even with an experienced rider, may be unpredictably upset by turbine noise, movement or shadow effects there are many who may not react or can become acclimatised over time. I accept that this may not be an option for occasional visitors and businesses such as that run by Mrs Brock would have to assess whether ways through the wind farm could



still be promoted to guests or indeed used by local riders. As a result less confident riders might be reluctant to ride within certain distances of the turbines, although they would not be precluded from doing so. Turbines T2 and T23 are the closest to Glyndŵr's Way and are confirmed to be more than 200m away, the remainder being significantly further from the route. Whilst it would be against the public interest to permit proposals which would effectively discourage some members of the public from enjoying rights of access, I find no strong evidence that the development would have such an effect on riders or walkers sufficient to put significant numbers off using the rights of way through the appeal site to the detriment of tourism in the area. [62, 75, 77, 108, C6.1, C6.8-6.10, C6.13-6.14]

226. Various reports and surveys assessing the effect of turbines on the tourists have been referred to in evidence. Whilst individuals vary widely in their reaction to wind farms, not all react negatively to them in the landscape and do not change their destination choice on account of the presence of wind farms. There are certain locations which are more sensitive to wind farm development and this is particularly the case where people are visiting for the tranquillity, remoteness and natural scenery such as the area surrounding the appeal site. The potential negative effect on visitor numbers may still be low overall, but in relation to equestrians could be moderate. There is clearly uncertainty around the potential impact on tourism and recreation which might arise from the development. I am aware that in consideration of several wind farm schemes Inspectors considered the proposals would have a detrimental effect on tourism. However, each case must be determined on its merits and in this instance there is insufficient evidence to justify refusal of the appeal on these grounds alone. [C6.3, C6.12, C6.15, C6.16, C6.19, C6.23-6.26]

*Effect on living conditions of local residents*

*(a) Internal access route*

227. PCC has raised no material issue with regard to the access track through the site which from the site boundary to the location of the turbines would follow a circuitous route across open farmland, taking advantage of the local topography. This route would be used by all vehicles entering and egressing the site and in doing so would pass within approximately 200m of the residential properties Fiddlers Green and Lower Fiddlers Green. Lower Fiddlers Green has open views towards the appeal site and the route of the access track. Concerns have been raised by the residents with regard to the effect this would have on their living conditions due to noise, dust and pollution both during its construction and subsequent use by high volumes of traffic accessing not only the appeal proposal but also the proposed LF and BG wind farms. [83, 87, A211, C4.1]
228. It is proposed to restrict construction hours within the site to between 07:30 and 19:30 on Mondays to Fridays and between 07:30 and 13:00 on Saturdays. Therefore vehicles associated with the site would be arriving and departing between these hours throughout the construction period. These restrictions would not apply to AILs as there is a need for these to take advantage of quieter times on the roads whenever possible. [130, C8.1]



229. The type and scale of the traffic generated by this scale of development when compared to the traffic currently experienced in the area would be significant and this would inevitably alter the living conditions currently experienced by the occupants of Fiddlers Green and Lower Fiddlers Green. However, the effect would be limited to the construction period only, after which the level of traffic using the access road in association with the operation of the wind farm would be commensurate with current levels in the area. I accept that development of other wind farms potentially using the same access route would have a cumulative effect. Nevertheless, the effect of traffic using the internal access route on the living conditions of the occupants of nearby properties would not be sufficient to warrant dismissing the appeal on these grounds.

*(b) Increased traffic on the local highway network*

230. In addition to traffic on the internal access road within the appeal site, the proposed development would provide a car park on land to the south of Fiddlers Green and Lower Fiddlers Green, close to the junction of the public highway with the BOAT. This car park would be capable of accommodating several vehicles and horse boxes and would be open to use at all times. The road serving it is a no-through road and continues past the proposed car park to Bryn Mawr Cottage and Hope's Castle Farm. [59, 89, 130, A211, C3.13, C8.1]

231. The status of the BOAT was questioned during the Inquiry and evidence was produced<sup>45</sup> to indicate that it is currently not open to vehicular traffic including horse drawn vehicles. However this would appear to be a temporary measure due to ground conditions along the route. I am not aware of any application to permanently alter its status. I acknowledge that the provision of the car park would attract people to the area as it would provide easy access to the BOAT and other public rights of way and that the traffic using the lane could increase significantly as few vehicles use it at present. However, there is no evidence that it would attract drivers who would see the potential to access the wind farm and its internal road from the BOAT. Whilst any increase in traffic on the lane would be likely to be noticed by residents living along it, I do not consider that it would be sufficient to harm their living conditions.

*(c) Health*

232. Concerns were raised by CUP and local residents regarding the potential effect of the wind farm on health by reason of noise, AM and infrasound. Concerns were also raised with regard to the effect of radon gas on health. The effects were described as including a variety of symptoms ranging from a general feeling of discomfort, effect on breathing, chest pains, abdominal pains as well as "wind turbine syndrome" which studies suggest can be experienced up to 15km away. However there is no substantive evidence with regard to the particular effect the proposed wind farm would have on the health of local residents or in respect of radon gas. [59, 60, 70, 86, 94, 109-111, C4.8-4.9]

233. It is clear from the evidence of Miss Evans that her own health problems are directly related to noise and the distress she suffers was evident at times during the Inquiry. It

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is also recognised that people can become sensitised to wind turbine developments and the noise they generate. I understand that some residents are concerned about the possible effect of the proposal on their health, including the cumulative effect that may come about from other similar developments under consideration in the area. Nonetheless, I do not consider the evidence to be sufficient to warrant refusal of the appeal on these grounds.

*(d) Private water supplies*

234. Several properties within the area are reliant on private water supplies and those of Fiddlers Green and Lower Fiddlers Green have been identified as originating within the appeal site. As there is no mains water supply in the area, the occupants of these properties are reliant on the private supplies and the potential for contamination or loss of the supplies to the dwellings is of great concern to them. I recognise their concerns that such a basic requirement may be put at risk by the development.[84, 111]
235. It has been stated in evidence that at the MWCI the developer of the LF wind farm accepted that construction of the access track would have a detrimental effect on the private water supply to Fiddlers Green. There is also the risk that the ground adjacent to the main access track would become polluted by the very large number of vehicles using it to access not only the appeal proposal but also potentially BG and LF wind farms. If all or some of these developments were to go ahead as well as the appeal proposal it may be difficult to assess the source of any contamination. Notwithstanding this I consider the protection of the private water supplies to be a matter which can be achieved by a satisfactorily worded condition. [84, 130, 137, C9.3]

*(e) Shadow flicker*

236. Shadow flicker caused by both the sun and the moon were identified as a potential problem by local residents which would affect their living conditions. It is generally considered that dwellings located greater than ten times the rotor diameter from a turbine are unlikely to experience shadow flicker. The scale of the turbine proposed would have a maximum rotor diameter of 93m, giving properties within 930m of the nearest turbine the potential to experience shadow flicker. [95, 110, 114, C4.1]
237. Although the ES indicates that 8 dwellings would be within 930m of a turbine, I estimate that the reduction in the number of turbines to 17 would reduce the number of properties with the potential to be affected by shadow flicker to 3. Each property would experience the theoretical potential for flicker for less than 30 minutes per day. Two would experience this in the early mornings during May to July and the third in the afternoons during April, August and September. However, the estimate does not take account of cloud cover, times when the turbines are stationary and when rotors are aligned with the sun and do not cast maximum shadows. All these would reduce the actual amount of shadow flicker experienced by the properties. No evidence was presented by any of the parties that substantiates a possibility of shadow flicker from moonlight; such conditions could in any event coincide with occupied rooms having curtains drawn and/or being lit internally.

238. Although shadow flicker may potentially affect a small number of properties, it is a matter which would be controlled by a condition to regulate the operation of the turbines as necessary. I conclude that shadow flicker would not materially harm the living conditions of nearby occupiers.

*(f) Other matters raised by local residents*

239. Insofar as residential living conditions are concerned, it is noted in evidence that the appropriate test is whether the turbines would be present in such number, size and proximity that they would represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden, such that there is every likelihood the property concerned would come to be regarded as an unattractive and thus unsatisfactory (but not uninhabitable) place to live. [88, 109-111, 112, 116, 118, 119, 121, C4.3, C4.5]

240. The turbines would be visible from properties in the area of the appeal site and would affect the outlook from them, whether in respect of the dwelling or its grounds. However, I do not consider that the appeal proposal would represent an unpleasantly overwhelming and unavoidable presence in main views from most of the properties. I do not consider that this would increase significantly if LF wind farm was to be permitted, but the situation may alter if other wind farms in the locality were allowed. However, I am concerned that part of all 17 turbines would be visible from Gatehouse and with the closest turbine being 1.13km away there is the potential for the occupant, Miss Evans, to be affected. Given the health problems reported above, there is the likelihood the property would come to be regarded by her as an unattractive and thus unsatisfactory (but not uninhabitable) place to live.

*Planning balance and overall conclusion on Appeal A*

241. The proposal would make a contribution towards the UK target of 15% of energy to be derived from renewable resources by 2020 and the WG's aim of having 2GW in total capacity by 2015/17, although it would come towards the end of that target period. The planning system has an important role in delivering the above target and aim with the latter to be achieved by, amongst others, optimising the use of the existing SSAs. Nonetheless TAN 8 recognises that not all the land within the SSAs may be environmentally suitable for major wind power proposals and the Minister's letter of July 2011 confirms that all SSAs have a finite environmental capacity and output should not exceed the maximum levels outlined. In isolation the development would not exceed the target for SSA C, but it may be exceeded if other wind farms under consideration are permitted in advance of a decision on this appeal.

242. A balance needs to be struck between the benefits of generating electricity from renewable onshore wind and the identified impacts of the scheme on the landscape character and visual amenity of the area, the setting of the SAMs and LBs and other matters raised in evidence.

243. Although in respect of landscape character and visual amenity I consider that the development would cause harm, in TAN 8 there is an implicit objective to accept significant change in landscape character. I consider that the degree of change to the landscape, and as a consequence visual amenity, that would be brought about by the

development on its own would be consistent with the aims of TAN 8. However, in combination with other similar developments the balance may be tipped over into unacceptability. I am also satisfied that, subject to conditions, the development would be satisfactory with regard to noise and ecology.

244. I have identified substantial harm from the development to the setting of the SAMs Castell y Blaidd, Coventry Barrow and Ty'n y Ddöll Barrow which would be in conflict with policies of the development plan. Moreover the identification of harm to the settings of the Cwm y Hob LBs is of considerable importance and merits weight in the balancing exercise by reason of Section 66 of the 1990 Act.
245. I have also identified a degree of harm to tourism and although I have concluded that this harm would be insufficient to justify dismissing the appeal, it carries weight against it.
246. With regard to the effect of the development on the living conditions of local residents, I have concluded that the effect of the internal access route on the residents of Fiddlers Green and Lower Fiddlers Green would be limited. The residents of these properties would also be affected by increased traffic on the local highway network although it would not be sufficient to cause harm. Issues of the private water supply to the same properties I am satisfied can be protected by condition and matters raised in relation to the effect of the development on the health of local residents are also not sufficient to justify refusal of the appeal.
247. In terms of shadow flicker only three properties would potentially be affected for less than 30 minutes per day during three months of the year and such effects can be safeguarded via a condition. Although the turbines would feature in the outlook from several properties in the area surrounding the site, I have concluded that the proposed development would not appear unpleasantly overwhelming and an unavoidable presence in main views. However, I am concerned that with the proximity of the development to the Gatehouse and the circumstances regarding the health of the occupant that the property might come to be regarded by her as an unattractive and thus unsatisfactory (but not uninhabitable) place to live. This carries weight against the appeal.
248. However, on balance I conclude that the positive benefits of renewable energy, the location of the site within SSA C and the acceptable level of change to landscape character and visual amenity outweigh the considerable weight against the appeal from the identified harm to the setting of the SAMs and the limited identified harm in the other respects identified above. The evidence persuades me that the balance is in favour of the appeal and that the proposal would therefore accord with Policy E3 as the primary policy against which the appeal needs to be judged. On this basis I conclude that the appeal should be allowed.

### Appeal B

#### *Free and safe flow of traffic on the public highway*

249. As detailed earlier, the access route subject of Appeal B falls into three sections: from Ellesmere Port to Newtown, from Newtown to Cwm y Berllwyd; and from Cwm y Berllwyd to the site. Whilst PCC withdrew its objections to the access route appeal



prior to the Inquiry commencing, CUP and local residents maintained their objections on the grounds that the improvements required to the highway network and the traffic generated by the development would cause disruption to the free flow of traffic which would have consequences not only for the living conditions of the local population but also for the local economy and tourist industry. RES is of the opinion that there are no reasons for resisting the appeal on highway grounds. [31, 63, 106, 118, A154, A211, C7.1-7.2]

250. The access proposals from Ellesmere Port to Cwm y Berllwyd advanced as part of the appeal follow the route approved by WG as part of the strategic Traffic Management Plan (sTMP). This route, or parts of it, would also be used to serve other wind farm developments in SSA B and SSA C. Localised improvements to facilitate the passage of AILs will be required at various points along the strategic route. The final section, section 6 of the sTMP, was approved by WG in March 2014<sup>46</sup> and includes a new link road from the Mochdre Industrial Estate to the A483 south west of Newtown. This section would only be used by vehicles transporting AILs and not by the general public. The outline design for a new access off the A483 at Cwm y Berllwyd, which would be shared with the LF wind farm, has also been confirmed by WG<sup>47</sup> to be satisfactory. [C7.1-7.4]
251. The A483, which passes through Newtown, is a trunk road and carries a heavy volume of traffic. The construction phase of the wind farm, and other wind farms proposed in the area, would result in an increase in the traffic using the A483 and has the potential to add to the congestion already experienced at times along the route, particularly through Newtown. Moreover, the improvement works required to enable the passage of AILs along the strategic route would disrupt the flow of traffic, which could be exacerbated during the construction of the Newtown by-pass, scheduled to commence in 2015. A further consequence of the additional traffic would be increased traffic noise which could be detrimental to the living conditions of residents with properties close to the strategic route. [63, 73, 108, C7.1-7.3, C7.5]
252. It is during the construction phase of the wind farm that the development would generate the greatest number of vehicles using the strategic route and the consequent disruption to the flow of traffic and increase in traffic noise. During the operational phase the number of vehicles visiting the site for maintenance purposes would be few and during the decommissioning stage the numbers would not be as great as during construction. The number of vehicles would vary over the construction period, but it is probable that the greatest disruption would come from the passage of AILs. However, the route which would be followed is one that has been approved by WG as fit for purpose and use of it would be actively managed. The details of the management scheme would be addressed by condition as would the use of the Newtown by-pass if it becomes available for use in preference to the strategic route through the town. [63, 73, C7.5]
253. Local residents contended that the public would not benefit from the road improvements required in order to facilitate the AILs, namely the link from Mochdre

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<sup>46</sup> CD 5 Appendix 3.1a

<sup>47</sup> CD 43



Industrial Estate to the A483. However, the junction of the new road with the A483 would only allow vehicles to turn towards the south under controlled conditions and would not be suitable for use by the public. Use of the existing highway from Dolfor to the wind farm was put forward as an alternative route as the necessary improvement to the road would be of benefit to local road users. Whilst this might be the case, the practicalities of using this route have not been assessed in any detail and it is not within the remit of the decision maker to consider an alternative to the one proposed. [118]

254. The final 3.4km of the access route from the A483 to the site boundary of Appeal A would follow a route across open farmland proposed as part of the LF wind farm. The use of this route has been secured by agreement with the developers of the LF wind farm and the proposals are acceptable to PCC. The public highway would be utilised for approximately the final 1km of the route. It would require improvement through the strengthening of verges and provision of passing places. The diversion of traffic away from the narrow lanes which form the local highway network once the A483 is left would be to the advantage of local road users as any disruption to traffic flow on these relatively lightly trafficked roads would be restricted to the short section of highway close to the site. The movement of AILs along this section would require the closure of the road for periods of approximately 2-3 minutes. [31]
255. The wind farm both individually and in combination with the development of other wind farms in the area would result in additional traffic using the highway network. However, it is a matter agreed in the Transport SoCG that the traffic impact of construction traffic for the proposed wind farm on its own would not exceed the accepted screening threshold of potential significance. A similar conclusion was reached in respect of the cumulative traffic impact of construction traffic associated with the wind farms subject of the MWCI. The cumulative traffic impact may alter if the construction programme on which the assessment was based changes. Other developments such as the proposed wind farms at NG and BG could also have an impact. [C7.2-7.5]
256. There is therefore the possibility, depending on the number of wind farms constructed, for the increase in traffic to be greater than that estimated at any one time and which could be particularly noticeable on the minor roads in the vicinity of the site. However, it would not be a permanent effect but one which would be limited to the construction period. Although this would be spread over several years, the type and volume of traffic would vary within that time period and any disruption would fluctuate. The traffic flow, and in particular the AILs which would cause most disruption, would be managed and would use a predetermined route, the majority of which would consist of the strategic route approved by WG and the route through LF wind farm.
257. On this basis, I do not consider that overall the disruption to road users caused by the increased traffic and the consequences for the local population, economy and tourist industry as a result of the proposed wind farm would be unacceptable. As such the proposed access route would accord with Policies E3, SP6, SP12, GP1, GP4 of the UDP.

*Ecology and the Habitats and Species Regulations 2010*

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258. Although PCC withdrew its objection to the access route, CUP and local residents continued to raise concerns about the effect of the access route on biodiversity. This issue has been fully explored in the ES and additional information has been provided in the SEI. On the basis of these reports and subject to certain conditions NRW and PCC find the development to be satisfactory. [143-145, A216, C10.1]
259. However, there is one outstanding matter raised by NRW. NRW considers that the ecological issues associated with the scheme concern European Protected Species (EPS) and the species potentially affected include the dormouse, common and soprano pipistrelle bats and otter. The demonstration that there will be no detriment to the maintenance of the favourable conservation status of each of the affected populations of these species is material to the decision and there is therefore a need to consider whether the proposals are compliant with the provisions of the Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations). [A217]
260. With regard to the dormouse, subject to the implementation of agreed mitigation and necessary compensatory measures which could be secured through condition, NRW considers that it can be demonstrated that the development would be unlikely to be detrimental to the maintenance of the favourable conservation status of each affected population of the species in this natural range. The mitigation and compensatory measures referred to by NRW are addressed in the conditions put forward for consideration. A derogation licence would also be required. [ID 25]
261. The proposal has the potential to affect the foraging and dispersal of a number of species of bats. However, NRW considers the proposed mitigation to be satisfactory for the purposes of assessing the impact on the conservation status of the species and demonstrating that the proposal would be unlikely to be detrimental to the maintenance of the favourable conservation status of bat populations in their natural range. A derogation licence would be needed. [ID 25]
262. Whilst water voles were not recorded in the surveys undertaken as part of the appeal proposal they were subsequently recorded within 1km of the route as part of survey works for another scheme. In view of this NRW considers that updated surveys should be undertaken prior to work commencing and any necessary mitigation undertaken. This is provided for in the recommended conditions. [ID25]
263. The otter is a feature of the River Wye Special Area of Conservation (SAC). As some of the works are within or adjacent to the catchment of the River Wye, NRW is of the opinion that a Habitats Regulations Assessment (HRA) needs to be undertaken by the competent authority prior to any permission being granted for the scheme. NRW considers that RES has not included detailed mitigation measures as part of its proposals. It is therefore unable to conclude that there will be no likely significant effect on the SAC, alone or in combination with other projects, and an Appropriate Assessment (AA) is required to be undertaken by the competent authority. However, subject to conditions, NRW considers that the competent authority would be able to conclude that the appeal proposal would not adversely affect the integrity of the River Wye SAC. [ID 25]

264. RES considers that the information already provided demonstrates satisfactorily that there will not be any likely significant effects and an AA is therefore not necessary. Moreover, RES does not agree that it would be necessary to impose the conditions proposed by NRW in order to conclude that the appeal proposal would not adversely affect the integrity of the River Wye SAC. [ID 26, A217-218]
265. The possibility that the proposal would have likely significant adverse effects cannot be ruled out without further consideration. As the competent authority it falls on Welsh Ministers to undertake an AA but to assist in that process I have set out below my assessment of the factors that need to be taken into account.
266. The ES in addressing the anticipated impact of the proposed access route on sensitive ecological receptors considered the effect of the proposed route on the River Wye SAC together with the River Ithon and the Esgairdraenllwyn Pastures SSSI. The ES concluded that the development would be unlikely to affect the ecological integrity of the SSSI or the wider River Wye SAC and the impact on designated sites was considered not significant at the national level. Moreover, in respect of otters the ES states that no otter holts or resting places were identified near to the proposed route and no direct impacts on them were anticipated. However, as the species is known to pass through the area a precautionary approach would be adopted prior to construction to ensure that all legal requirements afforded to otters were met through a CEMP. The conclusion was reached that the likely impact relating to otters was deemed to be not significant. The recommended conditions include for the provision of a CEMP.
267. The purpose of the CEMP is to provide a mechanism that would ensure the implementation of any measures that may be required to protect otters (and other protected species) and the habitat of the River Wye SAC. The SAC would not be directly affected by the development and the proposed mitigation would address the protection of protected species such that harm to the local populations would be unlikely. Moreover the CEMP would ensure that the sensitive habitats of the River Wye would be unlikely to be affected, thus maintaining water quality which is vital to the maintenance of the habitat quality of the river on which the otter and other qualifying species rely [ID 25]
268. A decision on whether an AA is necessary should be made on a precautionary basis. Any plan or project not directly connected with or necessary to the management of the site should be subject to an AA of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will not have a significant effect on the site, either individually or in combination with other plans or projects. NRW has commented that the submitted information focuses on evaluating EPS and the significance of any impact in terms of their geographical context and does not assess the impacts on EPS with regard to consideration of current status, demonstration of no detriment to maintenance of their favourable conservation status and the tests in Regulation 53(2) of the Habitats Regulations.
269. I am in agreement with NRW that on the submitted information it cannot be concluded that there will be no likely significant effect on the SAC and EPS, alone or in combination with other projects, and an AA is therefore required to be undertaken by the competent authority. However I am also in agreement with NRW that, subject to

conditions, the competent authority would be able to conclude that the appeal proposal would not adversely affect the integrity of the otter population or the River Wye SAC. [ID 25]

*Planning balance and overall conclusion on Appeal B*

270. I have concluded that overall the disruption to road users caused by the increased traffic and the consequences for the local population, economy and tourist industry as a result of the proposed wind farm would not be unacceptable. Moreover, PCC and NRW have raised no objection with regard to the effect of the development on the ecology and biodiversity of the area and the evidence has not convinced me otherwise.

271. On the matter of the AA, whilst I am of the opinion that one is required, I am of the opinion that the competent authority would be able to conclude that subject to the imposition of appropriate conditions the appeal proposal would not adversely affect the integrity of the populations of otters and other qualifying species or the River Wye SAC. On this basis and subject to the AA being completed, I conclude that the appeal should be allowed.

**Other matters**

*Timing of the decisions*

272. As emphasised by PCC the timing of the decisions on the appeals could have consequences for WG policy and on this basis PCC considers a decision should not be made in isolation of the schemes subject of the MWCI. The capacity limits in Welsh policy will be fundamental to all the decisions and as indicated above, the current proposals for wind farms in this area would, in combination, exceed the capacity for SSA C as set out in the Ministerial letter. It is important that in reaching a decision on the appeals regard is had to the consequences which might arise from any developments allowed prior to the decision being made. However, there is no reason to delay a decision in order to await the outcome of the MWCI or other similar proposals in the system. [54, 55, A106-109, B134-137]

*Conditions*

273. The conditions for each appeal agreed between the parties and discussed at the Inquiry provide an appropriate basis for the set of conditions that would need to be applied if planning permission were granted for the proposed development. I have drafted a revised set of conditions for each appeal in Annex D and E attached to this report and, if Welsh Ministers are minded to allow the appeals and grant planning permission, I consider those conditions would meet the tests prescribed in Circular 016/2014. [129-145]