# **Appeal Decision**

by Paul Selby BEng (Hons) MSc MRTPI

an Inspector appointed by the Welsh Ministers

Decision date: 25/09/2025

Appeal reference: CAS-04093-C1D8Z1

Site address: Land at North Court Farm, Redwick, Caldicot NP26 3DX

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is made by Clean Earth Energy Ltd against the decision of Monmouthshire County Council.
- The application Ref DM/2023/01045, dated 24 July 2023, was refused by notice dated 2 December 2024.
- The development proposed is a single wind turbine, including access track, crane pad and associated infrastructure.
- A site visit was made on 27 August 2025.

## **Decision**

1. The appeal is allowed and planning permission is granted for a single wind turbine, including access track, crane pad and associated infrastructure, at Land at North Court Farm, Redwick, Caldicot NP26 3DX, in accordance with the terms of the application Ref DM/2023/01045, dated 24 July 2023, subject to the conditions set out in the schedule to this decision letter.

## **Background and Main Issues**

- 2. Only one reason was given for the Council refusing the planning application; namely, that it is located in the Gwent Levels Redwick and Llandevenny Site of Special Scientific Interest (SSSI) and is not necessary for the management of the SSSI. However, the accompanying officer's report also alleges harm in relation to landscape effects and on the Gwent Levels Landscape of Outstanding Historic Interest (LOHI). Policy 17 of Future Wales also states that, in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency. Consequently, I consider the main issues to be:
  - The effect of the proposal on biodiversity and ecosystem resilience, having particular regard to its location within the Gwent Levels Redwick and Llandevenny Site of Special Scientific Interest (SSSI)
  - The effect on the landscape, visual receptors and the Gwent Levels LOHI, and
  - Whether the public benefits of the proposal would outweigh any harmful effects.

### Reasons

3. The appeal site lies within the Gwent Levels Redwick and Llandevenny SSSI and the Gwent Levels LOHI. It occupies a somewhat rural setting of pasture fields separated by drainage channels (reens and ditches) but also lies in proximity to industrial buildings associated with the Gwent Euro Park. Manmade structures present within the wider landscape include the A4810 road, high voltage electricity cables/pylons and wind turbines. The proposal would be situated around 230m northwest of an existing 150m turbine, the access track for which would be modified to serve the appeal scheme.

# Biodiversity and ecosystem resilience / SSSI

- 4. The Redwick and Llandevenny SSSI is one of six SSSIs forming the Gwent Levels network. Designated in 1989, special features comprise reen and ditch habitats and the aquatic and terrestrial insects and invertebrates they support, in addition to shrill carder bee, which depends on flower-rich grassland.
- 5. The results of a Phase 1 habitat survey reported in the Ecological Assessment (EA) record that the field within which the turbine would be situated mainly comprises arable land. At its periphery are habitats such as poor semi-improved grassland and tall ruderal. The southern and northern edges of the site feature densely vegetated, species-poor reens managed by Natural Resources Wales (NRW). The access track serving the existing turbine to the southeast bisects the field and is bounded by a heavily vegetated ditch. At the western boundary is a landowner-managed dry ditch and a hedgerow. Whilst the Phase 1 survey was conducted over 3 years ago, based on my site observations I have no reason to dispute its findings regarding site-based habitats.
- 6. In a letter dated 8 May 2024, NRW confirms that the watercourses bordering the appeal site form part of the SSSI, the special interest of which is dependent on the quality and quantity of water and the continued maintenance and management of the drainage system. It also notes that shrill carder bee depends on grassland and ruderal habitats.
- 7. The appellant contends that past assessments have found the SSSI's special features to be in an 'unfavourable' condition because of poor management, including for shrill carder bee. There is little evidence that site-based habitats of potential importance to the SSSI are in good condition. In any case, there would be no permanent loss of existing reen systems or semi-improved grassland, not least because the proposed development would make use of an existing reen crossing and access track. Subject to conditions to minimise direct and indirect impacts during the construction phase, there would be no significant harm to habitats and species for which the SSSI has been designated.
- 8. Notwithstanding this, the Council's reason for refusing the application was that the proposed development is not necessary for the management of the SSSI. This refers to paragraphs 6.4.25 and 6.4.26 of Planning Policy Wales (PPW), which states that there is a presumption against certain forms of development located in a SSSI as a matter of principle. This stance is also reflected in the 'step-wise' approach set out at paragraph 6.4.15 of PPW, which aims to ensure that planning authorities fulfil the duty of Section 6 of the Environment (Wales) Act 2016 by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions. Stepwise step 1b notes that proposals in statutory designated sites are, as a matter of principle, unacceptable and must be excluded from site searches undertaken by developers.
- 9. The generation of energy is the primary intention of the appeal development. This has no direct connection to the management of the SSSI and is not necessary for it. Consequently, the appeal scheme, by virtue of its location within the boundary of the

SSSI, is plainly contrary to the abovementioned provisions of PPW. The proposal therefore fails to satisfy step 1 as it does not 'avoid' a designated site. Whilst I recognise that the application was originally submitted before the relevant changes were made to PPW via a Ministerial letter published in October 2023, decisions must nonetheless be taken in the light of prevailing planning policy.

- 10. In terms of steps 2 and 3 of the step-wise approach, the turbine base, access track extension and switchgear housing unit would be in situ permanently, with long-term sealing of underlying soil habitats. However, the utilisation of the existing access track and the siting of the turbine and related infrastructure on arable land would assist in retaining the most valuable site-based habitats. Measures to mitigate ecological impacts during construction, including the details of cabling and trenching, could be secured via conditions. Bat surveys suggest that there were no large roosts close to the site during the monitoring period. Although the EA notes the potential for fatalities to common/soprano pipistrelle and noctule bat species from turbine collisions, a condition to require the feathering of turbine blades during idling would reduce this risk.
- 11. PPW makes it clear that enhancement measures intended to secure a net benefit for biodiversity must be identified at each stage of the step-wise approach. In this regard a Habitat Management Plan (HMP) has been prepared which takes on board measures recommended in the EA to enhance the site for wildlife and increase biodiversity. A suitable level of detail is provided and there is a clear implementation and monitoring framework. NRW has been consulted on the HMP and does not object to its provisions.
- 12. Watercourse enhancement and management measures included in the HMP, including casting the westernmost ditch, are generally consistent with the July 2023 Ecological Mitigation Plan for the neighbouring (operational) Rush Wall turbine. Consequently, the 'additional' HMP measures specific to this proposal involve fencing off a peripheral area of existing grassland and ruderal north and east of the access track and thereafter managing and monitoring it to optimise its foraging potential for shrill carder bee; habitat enhancements for amphibians and reptiles (e.g. cavities and crevices for shelter and hibernation, a basking spot, log piles and 'heaps' for grass snakes to lay eggs), which may also benefit small mammals and invertebrates; and improved management of the hedgerow on the western boundary. Although modest in both qualitative and quantitative terms, these enhancement measures appear consistent with NRW advice and would provide potential benefits to special features of the SSSI, including by reducing overshading to the westernmost watercourse.
- 13. The EA's finding that turbine collisions would not affect the local or favourable conservation status of any bat species assumes that the blade tips would be at least 50m from linear features typically used by some species for foraging and commuting. To achieve this NRW recommends a condition to ensure that vegetation associated with the reen on the eastern boundary of the field is maintained at ground level. A condition to secure micro-siting of infrastructure in accordance with nature conservation principles would resolve any potential tensions between the necessary bat conservation measures and the grassland enhancement objectives proposed in the HMP.
- 14. Ornithological surveys found little egret and cormorant to be the only target species to make regular movements through the area, but in small numbers. The EA finds little potential for bird displacement and collisions and a low likelihood of significant effects on local populations. Although the site lies around 2.5km from the Severn Estuary, a designated Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar wetland of international importance, estuarine wildfowl were not a feature of the ornithological surveys and no qualifying interest species for which the Severn Estuary SPA and Ramsar site are designated were recorded as flying over the site. On this

basis it is reasonable to conclude that there are no likely significant effects on the SPA, SAC and Ramsar site and that an appropriate assessment is not therefore required. Neither the Council nor NRW has made any indication to the contrary.

- 15. The bat and ornithological species surveys upon which the EA relies were conducted in 2021 and 2022. Although there is little evidence to suggest that site conditions have changed to an extent which would render them wholly unrepresentative, where there is a notable gap between the dates of surveys and a scheme's eventual construction it is best practice for observations and recommendations to be revisited to ensure that they remain valid. Given the circumstances of the case, I consider that these updates could be secured as a pre-commencement condition and potentially conducted alongside the walkover survey intended to inform the construction environmental management plan (CEMP). Moreover, given the uncertainties in the baseline, as well as in gauging the relative level of local bat activity, I agree with NRW that a condition would be necessary to secure post-construction bat monitoring and a scheme of turbine curtailment.
- 16. To conclude on this main issue, I have found that special features of the SSSI and other designated sites would not be adversely affected by the appeal proposal. Uncertainties in the evidence mean that there could be potential adverse effects on bats, which are European Protected Species. There would also be some loss of soil habitats due to the siting of permanent infrastructure on greenfield land. Nonetheless, mitigatory conditions would acceptably reduce harm to bats and other species and habitats, and permanent loss of terrestrial habitats would be limited in extent. I am satisfied that the habitat restoration and enhancement measures specific to this proposal and set out in the HMP would achieve a net benefit for biodiversity within a timely fashion.
- 17. Consequently, steps 2, 3 and 5 of the step-wise approach are met. As the proposal would not result in harm of any significance to features of the SSSI and other ecological interests, and would achieve a net benefit to biodiversity, I conclude that the proposal would accord with the requirement in policies 17 and 9 of Future Wales for proposals to demonstrate that they would not have an unacceptable adverse impact on the environment whilst securing a biodiversity net benefit and ecosystem resilience. It would also accord with the green infrastructure, biodiversity and nature conservation objectives of policies SD1, LC1, NE1, GI1 and DES1 of the Monmouthshire Local Development Plan (LDP).
- 18. Notwithstanding the above, the proposal is located within a SSSI and is not necessary for its management. It therefore fails to accord with step-wise step 1 and is thus in conflict with key provisions of PPW in this regard. This is a material consideration which may justify making a decision contrary to the development plan. I return to this matter in the 'Planning Balance'.

Landscape, visual receptors and the Gwent Levels LOHI

- 19. The appellant has prepared a Landscape and Visual Impact Assessment (including an addendum to the original report) which has been prepared by qualified professionals in accordance with best practice guidance. Potential effects of the development on landscape character and visual receptors are assessed over a 15km study area; extended to 23km for assessing cumulative impacts with other turbines. Modelled Zones of Theoretical Visibility (ZTVs) have influenced the selection of representative viewpoints for gauging impacts.
- 20. The site is not subject to a local landscape designation, albeit land to the south and west lies within the Caldicot Levels Special Landscape Area designated by the Newport Local Development Plan. The site forms part of the Gwent Levels National Landscape Character Area, noted as being one of the finest examples of a 'hand crafted' landscape

with distinctive historic patterns of settlement and reens, coastal defences and reclamation works dating from the Roman period. The reens are recognised for their rare and diverse plants and invertebrates, whilst buried under the alluvium are archaeological deposits of 'immense potential'. Reflecting the importance of such features, the area has been registered as a LOHI by Cadw. It therefore comes as no surprise that, under NRW's LANDMAP datasets, the development site falls within 'historic landscape' and 'landscape habitat' aspect areas evaluated as 'outstanding', and 'visual and sensory' and 'cultural landscape' aspect areas evaluated as 'high'.

- 21. The proposed turbine would lie within the LOHI, close to its northern boundary. I saw that the level topography and prevalence of boundary trees and hedgerows tends to reduce the prominence of some modern landscape elements, such as the A4810 road and industrial estate which lie close to the development site. However, the processions of steel lattice towers supporting overhead electricity lines, and the four existing wind turbines within visual range of the site, are prominent structures which bear significantly on the baseline character of the landscape.
- 22. The construction of the turbine foundations, extension of the access track and provision of a substation/switchgear housing unit would result in the permanent loss of some arable land and erode the currently open character of the field. However, screening by established field boundaries, which would be retained, would ensure that these elements would have a limited effect on landscape character.
- 23. I saw on my site visit that the relative prominence of the four existing operational turbines varies depending on direction and distance. Moreover, from some viewpoints not all are perceptible. Nonetheless, although varying in height and rotor diameter, the rhomboid siting and spacing of the four turbines means that they are perceived as a diffuse cluster. Although the proposed turbine would be sited far closer to its 'twin' in the neighbouring field than to the other more westerly turbines, the visualisations amply demonstrate that this irregular siting would not be apparent. From some vantagepoints to the northwest and southeast the siting of the proposed turbine would broaden the span of the existing cluster, but not to an extent which would harm the existing character of the landscape. Nor would the intensification of the cluster appreciably increase its prominence or magnify any sense of visual 'clutter'. The proposal would therefore accord with advice pertaining to wind farm extensions in the Design Commission for Wales' 'Designing for Renewable Energy in Wales' (November 2023).
- 24. Although generally well separated from the appeal scheme, the proposed turbine would be visible from some nearby settlements and dwellings. It would also be perceptible to recreational users of public rights of way (PRoWs), including from national trails and routes such as the Wales Coast Path and national cycle route 7 and, further afield, from Offa's Dyke trail and PRoWs within the Wye Valley Area of Outstanding Natural Beauty. I saw on my site visit that, from exposed or elevated locations such as the seawall south of Redwick and from Wilcrick Hill, clear views of the turbine blades, and in some cases the tower, would be clearly visible. Nonetheless, visual effects would be considerably mitigated by the mature vegetation present within the wider landscape and by the turbine's siting as part of an existing cluster, in visual range of overhead electricity lines. These baseline landscape attributes would also mitigate effects during the construction and decommissioning phases. Consequently, I agree with the ES that the proposal's landscape and visual effects would not be significantly adverse.
- 25. The application is supported by a Heritage Impact Assessment (HIA) which assesses potential effects on the LOHI. Cadw agrees with the finding of the HIA that there would be a very slight but not significant adverse effect on the LOHI. Although the HIA concludes that the proposal could have a major and adverse effect on buried

- archaeology, Heneb advises that a written scheme of investigation for a programme of work would suitably protect the archaeological resource. I concur with the views of Cadw and Heneb.
- 26. The cumulative assessment of landscape and visual effects is confined to operational wind turbines, as at the time that the LVIA was completed in September 2022 there were no 'in planning' or consented turbines within the study area. Although some time has elapsed since then, no party has brought to my attention any other development proposals which may have cumulative effects in combination with the appeal scheme. I am therefore satisfied that the evidence continues to provide a robust basis for establishing likely visual and landscape effects. Having regard to the 35-year operational timeframe, I conclude that in terms of effects on the landscape, visual receptors and the Gwent Levels LOHI, the proposal would accord with the objectives of LDP policies LC1, LC5 and SD1 and with policy 17 of Future Wales.

#### **Benefits**

- 27. The proposed turbine would export electricity to the national grid, supplying 8GWh of energy annually; equivalent to over 2,412 homes. The appellant estimates that the potential carbon saving would amount to around 1,702 metric tonnes per annum, or 59,500 tonnes over the 35-year operational timeframe. Whilst the manufacture, transportation and construction of the turbine would have a carbon cost, the wind turbine is expected to generate at least 32 times the energy used in its manufacture and installation. I have no reason to dispute these calculations.
- 28. As a viable grid connection has been secured there is a realistic prospect of the proposal contributing to the target expressed in Future Wales for 70% of consumed electricity to be generated by renewable means by 2030. Having regard to the estimated amount of electricity generated over the lifetime of the project, the scheme would make a modest contribution to supporting decarbonisation, transitioning to a low carbon economy, diversifying the electricity supply and improving energy security.
- 29. The proposal also has potential to supply 'behind the meter' power to local facilities, potentially contributing around 20% of a nearby brewery's total energy demand. However, the public benefit of providing a direct wire connection to nearby businesses additional to, or in place of, a national grid connection, and any alignment with published renewable energy targets, is unclear. Irrespective of the regional importance of the nearby employment site I afford this matter little weight.
- 30. The ES indicates that the proposal would have an overall positive socio-economic impact on the local area, supporting both the diversification of a rural business and the local construction industry, with potential add-on benefits. However, there is little evidence that the proposal is necessary to secure the viability of an existing rural business. Any construction or operational-related benefits would be largely incidental to the scheme and there is no certainty that they would accrue locally. I afford limited weight to these matters.
- 31. A community benefit fund is proposed, but in the absence of any associated, alleged harm this has not been shown to meet the test of necessity set out in Circular 13/97 'Planning Obligations'. I afford no weight to this.
- 32. I have already concluded that the proposal would provide a biodiversity net benefit. Although required by policy, having regard to the nature, extent, scope and time during which the restoration and enhancement measures would be in place, this carries limited weight in favour of the scheme.

33. Consequently, the principal public benefits of the proposal are the contribution to renewable energy targets and carbon displacement, and the provision of a net benefit for biodiversity and ecosystem resilience.

## **Other Matters**

- 34. The candidate turbine, which measures 149.9m in height, would be located approximately 150m from the A4810, which at the time of writing forms part of the Welsh Government (WG) managed strategic road network (SRN). In its consultation response, the WG Network Management Division has referred to a Circular published in December 2022 entitled 'SRN and the delivery of sustainable development', which states that wind turbines should be sited a minimum of height + 50 metres, or height x 1.5 (whichever is the lesser) from the highway boundary of the SRN. Although the proposed turbine would not meet this minimum threshold, this Circular applies only to the SRN in England, and neither it nor its predecessor is referred to in Welsh planning policy. The appellant notes that Technical Advice Note 8 'Planning for Renewable Energy' advised siting wind turbines a minimum of blade-tip height from the public highway, but that is no longer in force and there is no similar guidance in current national planning policy.
- 35. The English Circular states that the reason for identifying a minimum distance is to mitigate risks to the safety of road users arising from structural or mechanical failure from turbines. The identified threshold is, however, evidently a broad rule which does not take account of local risk factors such as ground conditions, route conditions, topography and prevailing wind directions. To accord weight to the minimum distance identified in the English Circular would require an evaluation of risks in relation to location-specific factors, yet the parties have provided no information in this regard.
- 36. The fact that a nearby 100m turbine lies only 60m from the A4810 neither demonstrates nor disproves the relative acceptability of the appeal scheme. However, the concern raised in WG Network Management Division's representation relates solely to the route's (current) status as part of the SRN. In the absence of any compelling allegation of harm to public safety in the context of this proposal, I am satisfied that conditions to secure a road safety audit would, in combination with applicable health and safety regulatory regimes, acceptably mitigate risks to the safety of highway users. Subject to the imposition of conditions, the WG Network Management Division, and the Monmouthshire and Newport City highway authorities, have not objected to other aspects of the proposal and I have no reason to find otherwise.
- 37. Residents have raised concerns about the potential for ice and blade throw and subsequent risk to residents and recreational users. However, although risks cannot be eliminated entirely, there is no evidence that wind turbines cannot be constructed and operated safely in proximity to sensitive receptors.
- 38. Wilcrick Hill Camp Scheduled Monument lies around 1.3km north of the site. Magor Conservation Area (CA) lies around 1.2 km to the northeast of the site, and Redwick CA is around 1.5 km to the south. Listed buildings are present within the two CAs and the Grade II listed Brick House lies around 1.6km from the site. The HIA concludes that there would be no more than a minor impact on the setting of these assets and no harm to their significance, including cumulatively with other wind turbines. I note that Cadw concurs with conclusions reached in the HIA and I too consider that the proposal would preserve historic assets.
- 39. The appeal site is located within Flood Zones 2 and 3 (Rivers and Sea) on the Flood Map for Planning. It also falls within Zone C1 of the Development Advice Map (DAM) associated with the 2004 version of TAN 15 'Development and Flood Risk', which is the

- applicable national policy as per a Ministerial Written Statement dated 31 March 2025. NRW has reviewed the appellant's Flood Consequences Assessment (FCA) and has confirmed that the proposal would be acceptable subject to a condition to secure the recommended flood mitigation measures. I agree.
- 40. In addition to visual impact, potential effects of the proposal on the living conditions of residents have been subject to robust evaluation by way of assessments relating to noise and shadow flicker. Subject to the imposition of relevant conditions the Council has not objected to the proposal in terms of these effects, and I have no reason to find otherwise.
- 41. NATS has not objected to the development. Although the land falls within an area where aircraft may conduct low level flight training, the Ministry of Defence does not object to the proposal subject to the applicant providing details of the location, height and date of the erection and operation of the turbine, and for the approval and implementation of an aviation safety lighting scheme. I agree that such a condition would be necessary.
- 42. Comments have been made by residents that the planning application was not properly advertised and that there are inaccuracies on the plans. Nonetheless there is no evidence of any procedural impropriety, and I am satisfied that the submitted evidence is sufficiently accurate.

## **Planning Balance**

- 43. PPW paragraph 6.4.27 indicates that development within a SSSI should only be proposed where it is considered to be appropriate and is not likely to damage the SSSI, and there is broad and clear agreement for mitigation and enhancement as part of a development plan. Although I have concluded that the proposal would accord with Future Wales and the Monmouthshire LDP, I am not of the view that there is an 'agreed position' within the relevant development plan which indicates that this development (or type of development) is acceptable within this particular SSSI, having regard to its notified features. In my view this differentiates the appeal scheme from the proposed business park and railway station in called-in application ref: CAS-02298-X2Q2Q2, which related to a site allocated within an LDP for that type of development. Furthermore, the siting of a wind turbine is evidently more flexible than that of a railway station, the provision of which was clearly a unique factor that satisfied the First Minister that it constituted a wholly exceptional circumstance. I therefore do not consider this called-in case to be justly comparable to the appeal scheme.
- 44. The appellant has also brought my attention to a determination by the Welsh Ministers not to call in an application for the extension of mineral working at an existing quarry within a SSSI (ref: C/2022/0171) as the issues were not of more than local importance. I note that the related planning report refers to a regional assessment indicating that there were no realistic alternatives to meet limestone aggregate needs in the subregion. The full details are not before me, making it difficult to reach any firm conclusions. Nonetheless, this indicates that locational factors, based on a regional study of alternatives, may have been a justifying factor in the Welsh Ministers' decision.
- 45. Paragraph 5.9.19 of PPW sets out what decision-makers should take into account in determining applications for renewable energy. In line with Future Wales policy 17, I attach significant weight to the renewable energy benefits of the scheme, albeit these benefits are modest in magnitude as the proposal is for a single wind turbine.
- 46. Subject to conditions, I have found that the construction, decommissioning and 35-year operational phases of the proposal would be acceptable in terms of impacts on the character of the landscape, visual receptors, the Gwent Levels LOHI and the 'Other

- Matters' listed above. These are neutral factors which weigh neither for nor against the scheme.
- 47. Irrespective of the appellant's assessment of alternative sites within a 2km radius, the proposal's siting within an SSSI means that there would be conflict with key provisions of PPW, paragraph 6.4.15 1b of which states that it will be wholly exceptional for development in statutory designated sites to be justifiable.
- 48. Nonetheless, paragraph 5.7.7 of PPW also says that the benefits of renewable and low carbon energy is of paramount importance. I have found that the proposal would accord with the development plan and would provide a renewable energy benefit. I have identified no substantive harmful effects, including to the SSSI's features. Whilst I recognise that the land which would be directly affected by the development could support features for which the SSSI is notified, there is little to suggest that the proposal would compromise the long-term ability of the site to protect such features, or that there would be habitat fragmentation or disruption to linear features essential for migration, dispersal or genetic exchange. Moreover, the renewable energy benefits of the proposal have an ecological dynamic as they would contribute, albeit modestly, in adapting to climate change. It has also been demonstrated that the proposal would secure a net benefit for biodiversity, including to SSSI features. There is little evidence that similar enhancements would occur by other mechanisms in the absence of the development.
- 49. I am therefore persuaded that this case represents a wholly exceptional circumstance which justifies the siting of the wind turbine within the boundary of this SSSI, and that granting planning permission would be consistent with the duty set out in section 6 of the Environment (Wales) Act 2016. No other factors lead me to find otherwise.

## **Conditions**

- 50. I have had regard to the suggested conditions in the light of Circular 016/2014 'The Use of Planning Conditions for Development Management'. During the appeal I sought the further views of the Council and applicant on these suggested conditions, as well as on proposed additional conditions. The imposed conditions listed in the schedule to this decision contain several adjustments to the consulted-on conditions, which I consider to be necessary to accord with the tests set out in the Circular.
- 51. As the proposal is acceptable in landscape and visual terms and the management of natural features would take place under an HMP, conditions requiring a scheme of landscaping and similar are not necessary and I have therefore not imposed them. I have removed the condition requiring buffer strips, instead integrating this into the condition requiring a CEMP.
- 52. A condition to require a decommissioning Traffic Management Plan is not needed as this duplicates another condition. Similarly, a condition requiring a section 278 agreement is not necessary as the need to identify and secure highway improvements is covered in other conditions. I have removed the requirement for the applicant to demonstrate rights of access as this is not directly related to the scheme.

## Conclusion

53. For the reasons stated above I conclude that the appeal should be allowed. In reaching my decision, I have taken into account the requirements of sections 3 and 5 of the Well-Being of Future Generations (Wales) Act 2015. I consider that this decision is in accordance with the Act's sustainable development principle through its contribution towards one or more of the Welsh Ministers' well-being objectives.

Paul Selby INSPECTOR

## SCHEDULE OF CONDITIONS

- 1) The development shall begin not later than five years from the date of this decision.
  - Reason: To comply with Section 91 of the Town and Country Planning Act 1990.
- 2) Subject to the conditions attached to this permission, the development shall be carried out in accordance with the following plans and documents:
  - Site Plan (Drawing No PR3759-IFP-HMP-B)
  - Block Plan (Drawing No PR3759-IFP-BP-D)
  - Turbine elevation (Drawing No 23.06.0001 Rev C)
  - Standard HV Cable Trench Section-A
  - Environmental Statement (July 2023).

Reason: To ensure that the development is carried out in accordance with the approved plans and documents submitted with the application.

3) The permission hereby granted shall expire 35 years from the date when electrical power is first exported ('First Export Date') from the wind turbine to the electricity grid network, excluding electricity exported during initial testing and commissioning. Written confirmation of the First Export Date shall be provided to the Local Planning Authority no later than one calendar month after the event.

Reason: To comply with the terms of the application.

4) If the turbine hereby permitted fails to produce electricity for supply to the grid for a continuous period of 6 months, a scheme shall be submitted to the Local Planning Authority for its written approval within 3 months of the end of that 6 month period for the repair or removal of the turbine. Where repairs or replacements are required the scheme shall include a proposed programme of remedial works. Where removal of the turbine is required, the scheme shall include the same details required under condition 5 of this permission. The relevant scheme shall thereafter be implemented in accordance with the approved details and timetable.

Reason: In the interests of the character and appearance of the area, in accordance with policies LC1 and LC5 of the Monmouthshire Local Development Plan 2011-2021.

- 5) Not later than 12 months before the expiry of this permission, a decommissioning and site restoration scheme shall be submitted for the written approval of the Local Planning Authority. The scheme shall make provision for the removal of the wind turbine and the associated equipment and foundations. The scheme shall include details of:
  - a. the extent of equipment and foundation removal and the site restoration to be carried out:
  - b. the management and timing of any works;
  - c. a traffic management plan to address likely traffic impact issues during the decommissioning period;

- d. an environmental management plan to include details of measures to be taken during the decommissioning period to protect wildlife and habitats;
- e. identification of access routes;
- f. location of material laydown areas;
- g. a programme of implementation.

The approved scheme shall be fully implemented within 24 months of the expiry of this permission.

Reason: In the interests of the character and appearance of the area, biodiversity and highway safety, in accordance with policies LC1, LC5, NE1 and MV1 of the Monmouthshire Local Development Plan 2011-2021 and Future Wales Policy 9.

- 6) No development, including ground works and vegetation clearance, shall take place until a construction environmental management plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include details of:
  - a. The construction programme including timetable; site clearance; site construction drainage; containments areas; buffer zones between storage areas (of 12.5m for reens and 7m for field ditches) and means of protection; spoil, oils, fuels, concrete mixing and washing areas; and any watercourse or surface drain/ditch.
  - b. Tree and hedgerow protection; invasive species management; the results of an updated walkover survey; and species and habitats protection, avoidance and mitigation measures.
  - c. Fuel and chemical storage and containment; waste generation and its management; water consumption, wastewater and energy use.
  - d. Protection of watercourses, reens and groundwater; subsoil surface water drainage; bunding and siting of fuel storage areas; sewage and foul water drainage and disposal; and emergency procedures and pollution response plans.
  - e. Cabling and trenching.
  - f. The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person; other responsible persons and lines of communication; and the times during construction when specialist ecologists need to be present on site to oversee works.

The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details.

Reason: In the interests of habitats and species including qualifying features of the Gwent Levels Redwick and Llandevenny SSSI, in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.

7) No development, including ground works and vegetation clearance, shall commence until an update report to the ecological assessment has been submitted to and approved by the Local Planning Authority. The update report shall provide details of: the validity of habitat and species surveys undertaken, including any significant changes to site-based habitats, and whether any species has moved onto the site or significantly changed its distribution within the site or immediate area; and required additional mitigation measures resulting from any significant changes to

habitats/species. The update report and any associated mitigation measures shall be implemented as approved.

Reason: In the interests of habitats and species, in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.

- 8) No development (excluding pre-construction site investigations) shall commence until a micro-siting protocol has been submitted to and approved in writing by the Local Planning Authority. The micro-siting protocol will allow for the variation of the turbine and associated infrastructure of up to 25m in any direction subject to the minimisation of impacts on environmental constraints. The protocol shall be implemented as approved.
  - Reason: In the interests of protected species (bats), in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.
- 9) The submitted Habitat Management Plan (HMP) (January 2024) shall be implemented in full and shall be retained as such for the lifetime of the development. Evidence of compliance with the HMP shall be in the form of monitoring reports, including georeferenced photographs, submitted to the Local Planning Authority in accordance with the timescales identified in the HMP.
  - Reason: In the interests of ecology and biodiversity, in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.
- 10) No development shall commence until a detailed scheme for the post-construction monitoring of bats has been submitted to and approved in writing by the Local Planning Authority. Monitoring shall be undertaken post construction in accordance with the Joint Agency guidance Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation (August 2021) and shall include:
  - a. Methods for data gathering and analysis
  - b. Location of monitoring
  - c. Timing and duration of monitoring
  - d. Appropriate persons and equipment to carry out monitoring
  - e. Timing and format for presenting and dissemination of monitoring results including submission to all data relevant databases
  - f. Contingency prescriptions that will be carried out in the event of failure to undertake required surveillance.

The scheme shall be implemented in accordance with the approved details upon commencement of operation of the turbine.

Reason: In the interests of protected species (bats), in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.

- 11)No development shall commence until a turbine curtailment protocol has been submitted to and approved in writing by the Local Planning Authority. The protocol shall be informed by the Joint Agency guidance Bats and Onshore Wind Turbines Survey, Assessment and Mitigation (August 2021) and shall provide for:
  - a. The circumstances under which the operation of the turbine is to cease immediately, including where the monitoring carried out pursuant to condition 10 shows activity levels at the turbine to be moderate or above using the Ecobat methodology.

- b. Triggers/thresholds which would require an adjusted curtailment protocol to be provided.
- c. Prescriptions which evidence implementation of the curtailment protocol.

Upon recommencement of operation, turbine operation shall comply with the adjusted curtailment protocol as approved.

Reason: In the interests of protected species (bats), in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.

- 12) The height of the nearest bat habitat features bordering the field in which the turbine shall be sited shall be maintained as follows for the lifetime of the development:
  - a. The hedgerows on the north and west boundary of the field shall be no greater than 10m in height; and
  - b. The reens and associated vegetation on the south and east boundaries shall be maintained at ground level.

Reason: In the interests of protected species (bats), in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.

- 13) The turbine blades shall at all times be feathered to reduce rotation speeds to below 2 rpm while idling, in accordance with paragraph 7.1.3(a) of the Joint Agency guidance Bats and Onshore Wind Turbines Survey, Assessment and Mitigation (August 2021).
  - Reason: In the interests of protected species (bats), in accordance with Future Wales Policy 9 and policy NE1 of the Monmouthshire Local Development Plan 2011-2021.
- 14) Abnormal Indivisible Loads (AILs) associated with the construction of the development shall be delivered strictly in accordance with a Traffic Management Plan (TMP) which shall be submitted to and approved in writing by the Local Planning Authority (in consultation with Welsh Government as Welsh trunk road highway authority or other relevant highway authority as appropriate) prior to AIL deliveries commencing. The TMP shall include:
  - a. proposals for transporting AILs from their point of entry to the Welsh trunk road network to the site that minimise any impact on the safety and free flow of trunk road traffic in accordance with the Design Manual for Roads and Bridges
  - b. evidence of trial runs that mimic the movement of the worst case AlLs along the access route where appropriate, at the discretion of the Highway Authority
  - c. number and size of AlLs, including loaded dimensions and weights
  - d. number and composition of AIL convoys, including anticipated escort arrangements
  - e. methodology for managing trunk road traffic during AIL deliveries, including identification of passing places and holding areas as necessary
  - f. convoy contingency plans in the event of incidents or emergencies
  - g. estimated convoy journey durations and timings along the route, including release of forecast traffic queues
  - h. swept path analysis modelling the movement of the worst case AILs at all potential horizontal and vertical constraints along the access route where appropriate, at the discretion of the Highway Authority

- i. proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed
- j. plans for the reinstatement of any temporary works after completion of the construction phase
- k. land ownership must be clarified on all drawings showing proposed highway modifications. The developer shall be responsible for the acquisition and reinstatement of all third party land including re-instatement of boundary features
- I. proposals to liaise with all relevant stakeholders and members of the public regarding construction traffic and AlL movements
- m. consideration of the cumulative impact of other abnormal load generating schemes proposing to use all or part of the same access route
- n. the appointment and role of a transport coordinator to administer the abnormal indivisible load delivery strategy
- o. means of control of timing of delivery of AIL movements
- p. temporary traffic diversions and traffic hold points
- q. details of banksmen and escorts for abnormal loads
- r. management and maintenance of layover areas, junctions, passing places, public rights of way and welfare facilities while AIL deliveries take place
- s. details of temporary signage
- t. details of any alterations to any works that are carried out to enable AIL movements.

Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.

## 15)No AlLs shall be delivered until:

- a. An assessment of the capacity and impact on all structures along those parts of the highway network which shall be utilised during the construction of the development including bridges, culverts, retaining walls, embankments; and
- b. Details of any improvement works required to such structures as a result of construction of the development

have been submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The required improvement works identified in the assessment shall be completed prior to the commencement of any Abnormal Indivisible Load deliveries to the development site.

Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.

- 16)No AILs shall be delivered until full details of any highway works associated with the construction of layover areas, passing places and highway improvements including:
  - a. the detailed design of any works
  - b. geometric layout

- c. construction methods
- d. drainage, and
- e. street lighting

have been submitted to and approved in writing by the Local Planning Authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The highway works shall be completed in accordance with the approved details prior to the commencement of any AIL deliveries to the development site.

Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.

17)Condition surveys of all highway features along those parts of the highway network which shall be utilised during the construction of the development shall be undertaken prior to, during and on completion of the construction phase of the development. The reports shall be submitted to the Local Planning Authority for approval within 28 days of the surveys.

Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.

18)Prior to the commencement of development, a scheme to provide for the remediation of any incidental damage directly attributable to the development to the parts of the highway network which will be utilised during the construction of the development including street furniture, structures, highway verge and carriageway surfaces shall be submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The scheme shall be implemented as approved throughout the construction phase of the development.

Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.

- 19) Prior to the commencement of development, a Road Safety Audit of the scheme (Stages 2 4) shall be undertaken in accordance with the Design Manual for Roads and Bridges GG 119 and submitted to the Local Planning Authority. The scheme shall be implemented as approved by the Local Planning Authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate).
  - Reason: In the interests of the safety and convenience of highway users, in accordance with policy MV1 of the Monmouthshire Local Development Plan 2011-2021.
- 20) The development shall be carried out in accordance with the mitigation measures set out in the Flood Consequence Assessment dated 27 October 2022, which includes setting the floor level of the substation, transformer kiosk and any other equipment housing electrics to a level of 6.31m AOD.
  - Reason: To minimise flooding risks and consequences, in accordance with policy SD3 of the Monmouthshire Local Development Plan 2011-2021.
- 21)No development shall take place until the applicant, or their agents or successors in title, has secured agreement for a written scheme of historic environment mitigation

which has been submitted by the applicant and approved by the Local Planning Authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme.

Reason: In order to mitigate the impact of the works on the archaeological resource.

- 22) The turbine shall have a semi-matt finish and be a pale grey colour the same or similar to RAL 7035 (light grey). Prior to the erection of the turbine, its exact specification including its finish and colour along with details of its dimensions, and the dimensions, finish and colour of other structures, kiosks and equipment housing electrics shall be submitted to and approved in writing by the Local Planning Authority. No name, sign, symbol or logo shall be displayed on any external surfaces other than those required to meet statutory requirements.
  - Reason: In the interests of the character and appearance of the area, in accordance with policies LC1 and LC5 of the Monmouthshire Local Development Plan 2011-2021.
- 23)Prior to commencement of construction of the wind turbine or deployment of any temporary structure 50 metres or more in height above ground level, an aviation lighting scheme shall be submitted to the Local Planning Authority for approval, defining how the development will be lit throughout its life to maintain civil and military aviation safety requirements. This shall set out:
  - a. details of any equipment or temporary structures with a height of 50 metres or greater above ground level which will be deployed during construction, and details of any aviation warning lighting that they will be fitted with,
  - b. the maximum height and coordinates of the wind turbine, the position of the warning lights, and the type and performance specification of lights to be used, and
  - c. estimated dates for the erection and subsequent operation of the wind turbine.

Thereafter, the undertaker must exhibit such lights as detailed in the approved aviation lighting scheme. The lighting installed will remain operational for the lifetime of the development.

Reason: In the interests of aviation safety.

24)Other than aviation safety lighting there shall be no permanent illumination on the site.

Reason: In the interests of the character and appearance of the area and ecology, in accordance with policies LC1, LC5 and NE1 of the Monmouthshire Local Development Plan 2011-2021.

25) All cabling shall be laid underground.

Reason: In the interests of the character and appearance of the area, in accordance with policies LC1 and LC5 of the Monmouthshire Local Development Plan 2011-2021.

- 26)Prior to the erection of the turbine, details of a mechanism and/or control module to reduce shadow flicker shall be submitted to and approved in writing by the Local Planning Authority. The development shall only be operated in accordance with the approved details.
  - Reason: In the interests of residential amenity, in accordance with policy EP1 of the Monmouthshire Local Development Plan 2011-2021.
- 27) The rating level of noise emissions from the combined effects of the North Court and Rush Wall wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall

not exceed the values for the relevant integer wind speed set out in, or derived from, the tables attached to these conditions at any dwelling which is lawfully existing or has planning permission at the date of this permission and:

- a. The wind farm operator shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The wind farm operator shall provide this information in the format set out in Guidance Note 1(e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
- b. No electricity shall be exported until the wind farm operator has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
- c. Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
- d. The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- e. Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, the wind farm operator shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from the Tables specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes

- shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
- f. The wind farm operator shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1(a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
- g. Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Table 1 – Between 07:00 and 23:00 – Noise limits expressed in dB LA90,10 minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods

		Wind Speed as measured at 10m height (m/s) - All limit values are in dB LA90								
		10 Minute								
Location	ESR	4	5	6	7	8	9	10	11	12
Green Meadow Farm	1	48.1	49.2	49.7	49.8	49.4	49	48.8	49.1	50.9
Well Cottages	2	48.1	49.2	49.7	49.8	49.4	49	48.8	49.1	50.9
Barecroft House	3	48.1	49.2	49.8	50	49.7	49.2	49.1	49.4	51.1
Blue House Farm	4	48.1	49.2	49.8	50	49.7	49.3	49.1	49.4	51.1
Blackwell Stud	5	48.2	49.3	49.9	50	49.7	49.3	49.1	49.4	51.2
Lower Grange	6	42.3	42.6	42.7	42.6	42.6	42.6	42.7	42.7	42.7
Summerleaze	7	42.3	42.6	42.7	42.6	42.6	42.6	42.6	42.6	42.6
Redwick House	8	41.9	42.2	42.3	42	42	42	42.2	42.2	42.2
Little Longlands	9	40.8	41.2	41.2	40.4	40.2	40.6	40.9	40.9	40.9
North Court Farm	10	40.2	40.6	40.6	39.2	38.9	39.3	40	40	40
Tonew Kennels	11	44.5	44.9	44.6	43.5	43.1	42.7	43	43	43
Longlands Farm	12	44.3	44.3	44.2	43.9	43.8	43.9	44.1	44.1	44.1

Table 2 – Between 23:00 and 07:00 – Noise limits expressed in dB LA90,10-minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods

		Wind Speed as measured at 10m height (m/s) - All limit values are in dB LA90								
		10 Minute								
Location	ESR	4	5	6	7	8	9	10	11	12
Green Meadow Farm	1	45.8	45.9	46.3	47	48.4	50.2	52	53.5	54
Well Cottages	2	45.8	45.9	46.3	47	48.4	50.2	52	53.5	54
Barecroft House	3	45.9	46.1	46.5	47.3	48.6	50.4	52.1	53.5	54.1
Blue House Farm	4	45.9	46.1	46.6	47.4	48.7	50.4	52.1	53.6	54.1
Blackwell Stud	5	45.9	46.1	46.6	47.4	48.7	50.4	52.2	53.6	54.1
Lower Grange	6	42.9	42.8	42.8	43	44	45	45.9	46.2	45.9
Summerleaze	7	42.8	42.8	42.8	42.9	44	45	45.9	46.2	45.9
Redwick House	8	42.5	42.4	42.4	42.4	43.5	44.7	45.7	46	45.7
Little Longlands	9	41.5	41.5	41.4	40.9	42.4	44	45.1	45.5	45.1
North Court Farm	10	41	40.9	40.8	39.9	41.6	43.5	44.8	45.2	44.8
Tonew Kennels	11	42.9	43.2	43.3	43.5	45.3	46.9	48.4	49.2	48.9
Longlands Farm	12	44.3	44.3	44.2	43.9	43.8	43.9	44.1	44.1	44.1

Table 3 – Coordinate locations of the properties listed in Tables 1 and 2

Property	ESR	Easting	Northing
Green Meadow Farm	1	341173	186757
Well Cottages	2	341120	186805
Barecroft House	3	341607	186805
Blue House Farm	4	341942	186896
Blackwell Stud	5	342247	186788
Lower Grange	6	342832	185527
Summerleaze	7	342568	185070
Redwick House	8	341592	184727
Little Longlands	9	341217	184914
North Court Farm	10	340445	184969
Tonew Kennels	11	340027	185700
Longlands Farm	12	341319	184921

Note to Table 3: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies.

Reason: In the interests of residential amenity, in accordance with policy EP1 of the Monmouthshire Local Development Plan 2011-2021.

## **Guidance Notes for Noise Condition**

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in Guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI).

## **Guidance Note 1**

- (a) Values of the LA90,10 minute noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.
- (b) The microphone should be mounted at 1.2 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, the wind farm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.
- (c) The LA90,10 minute measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1(d), including the power generation data from the turbine control systems of the wind farm.
- (d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in

degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres . It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10-minute periods shall commence on the hour and in 10-minute increments thereafter.

- (e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.
- (f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10-minute periods synchronised with the periods of data recorded in accordance with Note 1(d).

#### **Guidance Note 2**

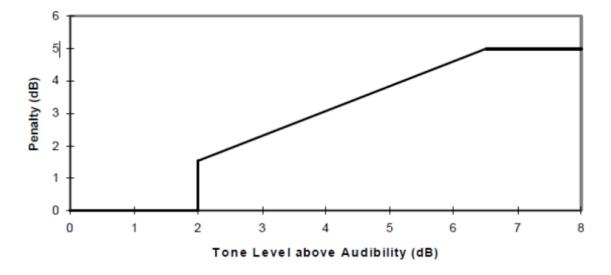
- (a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)
- (b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1. In specifying such conditions the Local Planning Authority shall have regard to those conditions which prevailed during times when the complainant alleges there was disturbance due to noise or which are considered likely to result in a breach of the limits.
- (c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1(d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

## **Guidance Note 3**

- (a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.
- (b) For each 10 minute interval for which LA90,10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise

immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

- (c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104109 of ETSU-R-97.
- (d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.
- (e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.
- (f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



# **Guidance Note 4**

- (a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.
- (b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2.
- (c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with

paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

- (d) The wind farm operator shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:
- (e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the Local Planning Authority in its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.
- (f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

$$L_1 = 10 \log \left[ 10^{L_2/10} - 10^{L_3/10} \right]$$

- (g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.
- (h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.