Penderfyniadau Cynllunio ac Amgylchedd Cymru
Planning & Environment Decisions Wales

Developments of National Significance Application Report

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by A L McCooey BA MSc MRTPI

an Inspector appointed by the Welsh Ministers

Report date: 20/05/2024

TOWN AND COUNTRY PLANNING ACT 1990 Section 62D

Developments of National Significance Application by: Twyn Hywel Energy Park Limited

Local Planning Authorities: Caerphilly & Rhondda Cynon Taf County Borough Councils

For: The construction and operation of up to 14 wind turbines and associated infrastructure including: hardstanding areas, electrical substation and control building with underground power cables, new access route connecting onto the A472, onsite access tracks, with pipeline and watercourse crossings, borrow pit(s), anemometer mast, temporary construction and storage compound with associated lay down areas near to the Site entrance, Habitat Management Area, and offsite works to facilitate the movement of abnormal loads such as the construction of over-run areas and temporary modifications to street furniture

At: 16 km North of Cardiff, on the border of Caerphilly and Rhondda Cynon Taf (on Mynydd Eglwysilan)

Applications for Secondary Consents

TOWN AND COUNTRY PLANNING ACT 1990 Section 57

By Twyn Hywel Energy Park Limited for the change of use of a dwellinghouse to use as a site office for use during the construction and operation of the wind farm development.

At Maes Diofal Farm, Senghenydd, CF83 4HW

TOWN AND COUNTRY PLANNING ACT 1990 Section 62F & COMMONS ACT 2006

An application by Elwynd Properties Ltd for deregistration and exchange of Common Land under Section 16 for land at Mynydd Eglwysilan

An application by Twyn Hywel Energy Park Limited for consent to construct works on common land under Section 38 for land at Mynydd Eglwysilan common

Ref: DNS/3272053

The application was confirmed as valid on 4 August 2023

Hearings were held on 11, 12, 13 and 14 March 2024.

Site visits were made on 21 March 2024.

Summary of Recommendation: That the Development of National Significance (DNS) and secondary consent planning applications be granted subject to conditions.

That the commons applications be granted and a de-registration and exchange order be made subject to planning permission being granted for the DNS Application.

Procedural Matters

1. The Proposed Development is EIA development as defined in the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. The application is therefore accompanied by an Environmental Statement (ES), which was the subject of a scoping direction issued by PEDW in October 2021. The ES comprises 16 topic based chapters, a non-technical Summary, appendices and figures. I have taken the environmental information into account in preparing this report.
2. On 19 September 2023 the determination period for the application was suspended until 19 January 2024 as a specialist consultee had not replied in time. This also affected the 10-day period for determining the procedure and for the appellant to amend the scheme. I requested additional information from the applicant, both Local Planning Authorities and Natural Resources Wales (NRW). During the suspension period, I also consulted the above parties on the revisions to Planning Policy Wales (PPW) that were published in October 2023.
3. There appeared to be an issue with the consultation arrangements in that Gelligaer Community Council were not consulted. This matter has been addressed and the Council has confirmed its support for the proposal.
4. The applicant responded to my request and issues raised by consultees and interested parties in a Document entitled Regulation 15(2) Response dated November 2023 [Regulation 15(2) Response] which included 11 appendices. Upon receipt of the further information and additional consultation replies in November 2023, Planning and Environment Decisions Wales (PEDW) consulted all other parties, affording 5 weeks for comments. This included an opportunity for the applicant to comment on further submissions of the two Councils and NRW, and the submissions of the Health and Safety Executive and Welsh Government Soil Policy & Agricultural Land Use Planning Unit (Soils Unit). The applicant submitted a lengthy reply to the Soils Unit and a Green Infrastructure Statement in December 2023.
5. Notifications of the four Hearings were issued on 23 January and 12 February 2024. The Hearings were held on 11 to 14 March 2024 as follows: Hearing 1: Landscape and visual impacts and Planning Policy; Hearing 2: Impacts on Ecology and Habitats, including proposed mitigation and enhancement; Hearing 3: Conditions and Mitigation, Planning Obligations; and Hearing 4: the Applications for Secondary Consents.
6. PEDW was made aware of the intention to include the Welsh National and Universal Mining Disaster Memorial Garden, Senghenydd on the statutory Register of Historic Parks and Gardens in Wales and announce it as the National Mining Memorial on 29 February 2024. All parties were afforded the opportunity to address the implications of this designation in writing.

Habitats Regulation Assessment

7. There are two National Protected sites (formerly European designated) for nature conservation within 10 km of the application site. Aberbargoed Grasslands Special Area of Conservation (SAC) lies 5.82 km north and is designated for the protected marshy grassland and marsh fritillary butterfly. Cardiff Beech Woods SAC is 6.81 km south and is designated for its woodland habitats.

8. Both SACs are designated for terrestrial habitats and butterfly species. They are not hydrologically connected to the Proposed Development, as such there is no route to impact on these sites (alone or cumulatively). As a result, these SACs were scoped out of the assessment in the scoping report and are, therefore, not considered further within the ES.

9. The Severn Estuary Special Protection Area (SPA) and Ramsar site are 13.7 km south east of the application site. The ES concludes that impacts on birds and habitats within the SPA boundary are unlikely at this distance. The only bird species with a sufficiently large range to be potentially affected by the development are Gull species. The ES concludes that Gull species do not use the site or normally fly over the site. There was considered to be no connectivity between the site and SPA for the reasons given in chapter 9 of the ES. As there are not likely to be any significant effects impacts on the Severn Estuary SPA and Ramsar site, they are scoped out of the ES.

10. The applicant has explained that there are no potential impacts on the National Sites (formerly European sites) and as a result there is no requirement for a Habitats Regulations Assessment. Natural Resources Wales (NRW) have not raised any concerns in relation to this assessment.

11. . I have had regard to the evidence and comments of consultees, in particular that NRW did not raise any concerns with these conclusions. I find that the proposal alone or in-combination with other projects would not have a likely significant effect on the integrity nor undermine the conservation objectives of the Aberbargoed Grasslands SAC or the Cardiff Beech Woods SAC, or the Severn Estuary SPA and Ramsar site. In view of the above findings, it is not necessary to undertake an Appropriate Assessment under Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

The Site and Surroundings

12. The site is largely U-shaped, located on open moorland above Senghenydd and Cilfynydd, Pontypridd. There is with a minor road (Bwlch Carnygelli) traversing the central part of the site. Several byways also occupy the site, with one running parallel to the route of the Senghenydd Dyke and two others acting as branches to connect this byway with Bwlch Carnygelli in the north-east and Eglwysilan Road, which forms the boundary of the site in the west. A number of public rights of way (PROWs) branch from these byways and roads, connecting the settlements in the valleys below with the uplands of the Site including the Rhymney Valley Ridgeway Walk and Cistercian Way long distance trails. The Senghenydd Dyke is a horseshoe-shaped linear earthwork (bank and an internal ditch) which survives to a varying degree and is a significant landscape feature which runs around the inner arc of the site. It once marked an early medieval territorial boundary before acting as the edge of a 13th century deer park associated with Caerphilly Castle. The Site also hosts a number of other assets of cultural and heritage interest, including eight Scheduled monuments.

13. There is one property within the site itself (Maes-Diofal Farm). Three properties lie adjacent and outside of the site as it wraps around them: Llanbradach Fawr Farm, Gelli Hir Farm and Tair Waun Uchaf Farm.

14. The Site contains a number of existing man-made vertical features, including three telecommunication masts in the western part of the site and a number of overhead lines, including a 400kV line which runs east to west within the northernmost part of the Site, and a number of high and low voltage lines (275kV, 132kV and 33kV) running from north to south through the central portions of the Site. An existing single turbine is located just to the north-east of the Site at Castell Llwyd Farm and is 77m to maximum blade tip height.

15. To the west are the settlements of Cilfynydd and Taff Vale along the A470. To the north is the hamlet of Llanfabon and Nelson along the A472. In the east are Ystrad Mynach and Llanbradach, linked by the A469. Caerphilly and its suburbs lie to the south-east. Senghenydd is located between the east and western arms on the south side of the site.

The Proposal

DNS Application

16. Whilst described as up to 14 wind turbines, no variation has been sought and the proposal is therefore to be treated as described. The turbines would have a maximum blade tip height of 200m, rotor diameter of 155m, and a hub height of 122.5m. The actual hub height and rotor diameter would depend on the final turbine type selected. Consistent with the precautionary principle, the ES assesses a 'worst case scenario' based on the maximum 200m turbine height. The indicative output capacity at this stage is 92.4MW, with each turbine providing up to 6.6MW. The foundations (comprising both stone and steel-reinforced concrete) would typically measure 22.8m in diameter with a concrete depth of 6m and overlay of depth approximately 0.5m. Each turbine would require approximately 762 cubic metres of concrete. It is proposed to cap turbine foundations with soil material and they would be re-turfed with the removed material. Where vegetation is sparse or unlikely to regenerate, reseeding with a local seed mix and appropriate aftercare is proposed. There would be a permanent hardstanding for cranes adjacent to each turbine.

17. The onsite substation with storage and parking areas would be in a compound measuring approximately 100m x 50m surrounded by a palisade fence painted in a colour agreed with the Local Planning Authority. There would also be a control building of coursed pennant stone with a ridged slate roof. The substation would connect to the 400kV Cilfynydd substation operated by National Grid via an underground 132kV export cable. The substation is a substantial complex located to the north of the site, near Llanfabon. A search corridor for the export cable is included in the application site. Underground power cables would link the turbines to the on-site substation generally laid in cable trenches alongside access tracks. Around 15 km of internal access tracks and two borrow pits are proposed.

18. Access from the public road network would be from the B4255/A472 roundabout to the south of Nelson and a link road serving a modern industrial/commercial estate. This would be the sole access to the site for abnormal loads associated with the turbine equipment, as well as access for construction materials and ongoing operational traffic. Abnormal loads would be delivered to the site from the Port of Entry at Swansea and subsequently via the M4 and A470 to the A472.

19. It is proposed that the turbines and other infrastructure would be subject to a standard 50m micrositing allowance which would be applied if adverse ground conditions be encountered during pre-construction ground investigations, or where more optimal ground conditions are available. Any movement of infrastructure would be dependent on other onsite constraints. Restrictions to micrositing are proposed to ensure that the final position of the turbines or infrastructure are not varied to such a degree as to cause a notable change in the predicted environmental effects outlined in the ES.

Common Land Applications

20. The Section 16 application is to deregister common land and provide replacement land. Seven separate areas of replacement land adjacent to the common are proposed. The area of land to be de-registered (Release Land) under section 16 amounts to approximately 46.9 Ha and approximately 56.3 Ha of Replacement Land is offered in exchange. The aim is to ensure that there is no overall reduction in the level of common land or grazing available and no loss of public access.

21. The release land is almost exclusively moorland and dry upland heath with improved and semi-improved grassland to the south east. The replacement land is mainly unimproved grassland with small parcels of woodland and areas of bracken. Once construction is completed the majority of the release land and access tracks would be available to users of the common.

22. The Section 38 application is for consent to undertake restricted works on the common land. These are to upgrade a byway open to all traffic (BOAT) so that it may be used to serve the development, undertake other works to the highway and the laying of an underground cable to enable the Proposed Development to export the electricity from the on-site substation to the national grid. Once completed these works would have a limited effect on the common.

Change of use from residential to site project office at Maes Diofal Farm.

23. The farm is within the application site and the land owner has expressed a preference to move to alternative residential accommodation off site whilst retaining the surrounding farm buildings and land in agricultural use. The property is a large cottage with a large garden. The proposal is to reuse the existing residential building as a project office during construction of the proposed wind farm, with ancillary use thereafter for necessary maintenance and operations office use. The proposed offices would be subsidiary to the main construction office and would only be used by a small number of staff. As a result there would be no more traffic than would occur for a typical residential property. There is sufficient parking available.

Planning Policy

The Development Plan

24. The development plan comprises Future Wales: the national plan 2040 (2021) (FW), the Rhondda Cynon Taf Local Development Plan (LDP) 2006-2021, which was adopted in 2011 and the Caerphilly County Borough Local Development Plan up to 2021 (Adopted November 2010).

National Policy

25. FW forms part of the statutory development plan. It acknowledges the impacts of a climate emergency and an ecological emergency and identifies key priorities, risks and opportunities to achieve the sustainable management of natural resources, including addressing the climate emergency and reversing biodiversity decline. Section 38(5) of the Planning and Compulsory Purchase Act 2004 also states if policies between

development plan documents conflict, then the most recent Policy document has priority. FW is the most recent Policy document and sits at the top of the Development Plan hierarchy and all development plan documents below it, are required to be in accordance with it.

26. In relation to climate change FW recognises Wales' potential for wind generation, the Government's support for large-scale projects and a planning system that provides a strong lead for such development, and a system that establishes support to the renewable sector to attract new investment and to reduce carbon emissions. It recognises that the need to reverse biodiversity decline and assist nature recovery is of imperative importance in its own right. Environmental pressures are causing global biodiversity to decline at rates not previously encountered in human history and the rate of species extinction is accelerating.

27. Policy 9 of FW expects development proposals to demonstrate action towards securing the maintenance and enhancement of biodiversity to provide a net benefit, the resilience of ecosystems and green infrastructure assets through innovative, nature-based approaches to site planning and the design of the built environment.

28. Page 15 of FW explains that 'deciding where to locate renewable energy generation technology is a spatial issue of such significance that national ambitions are unlikely to be achieved without national planning policies'.

29. At page 96 it states 'As set out in legislation, applications for Developments of National Significance must be determined in accordance with Future Wales, which is the national development plan for Wales'. In relation to renewable energy it explains that 'generating renewable energy is a key part of our commitment to decarbonisation and tackling the climate emergency' and refers to the 'following ambitious targets':

    - For 70% of electricity consumption to be generated from renewable energy by 2030.
    - For one gigawatt of renewable energy capacity to be locally owned by 2030.
    - For new renewable energy projects to have at least an element of local ownership from 2020.

30. Policy 17, 'Renewable and Low Carbon Energy and Associated Infrastructure', emphasises that Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs and states that decision makers must give significant weight to the need to meet Wales' international commitments and Government's 2030 target in order to combat the climate emergency. In Pre-Assessed Areas (PAA) for Wind Energy the Welsh Government has already modelled the likely impact on the landscape and has found them to be capable of accommodating development in an acceptable way. There is a presumption in favour of large scale wind energy development (including repowering) in these areas, subject to the criteria in Policy 18.

31. The site falls partly within PAA 10 for wind energy. Page 97 explains that PAAs are areas where Welsh Government has carried out an assessment to identify these areas 'to provide certainty where, in principle, developments would be acceptable. In these areas there is a presumption in favour of large-scale onshore wind energy development and the associated landscape change subject to the criteria in Policy 18. Outside of these areas a positive Policy framework still exists, subject to Policy 18.'

32. Policy 18 permits Renewable and Low Carbon Energy Developments of National Significance subject to satisfying 11 criteria and the requirements of Policy 17. The criteria include giving rise to no unacceptable impacts on nearby communities, protected nature conservation sites and species, built heritage assets, and outside PAA, the

landscape. The cumulative impacts of existing and consented renewable energy schemes should also be considered.

33. At the time of submission of the application Edition 11 was the extant version of PPW. As already explained Chapter 6 was updated during the course of the application process and has subsequently been included in Edition 12. The updated Chapter 6 aligns with the policy objectives of FW, including in relation to tackling the climate emergency (paragraph 3.30), securing an appropriate mix of energy provision (paragraph 5.7.6) and recognising the importance and benefits of decarbonisation and using natural resources sustainably (paragraph 5.7.7). It also notes the need for proposals to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations (paragraph 5.9.20).

34. PPW paragraph 6.4.3 recognises the key role played by the planning system in helping to reverse the decline in biodiversity and increase the resilience of ecosystems, by securing appropriate mechanisms to protect against loss and secure enhancement, including by addressing the consequences of climate change. Attributes of resilient ecosystems are described and a 'step-wise approach' emphasises the importance of avoiding damage to biodiversity as a first priority, followed by minimising impacts, then taking steps to mitigate any harm, securing on-site compensation and, finally, securing off-site compensation. Technical Advice Note (TAN) 5 'Nature Conservation and Planning' provides additional guidance in relation to ecology and biodiversity.

35. Development should take the opportunity to develop green infrastructure where this would improve ecosystems resilience. Paragraph 6.4.12 explains that where enhancement proportionate to the scale and nature of the development is not proposed, significant weight will be given to its absence, and unless other significant material considerations indicate otherwise, it will be necessary to refuse permission.

36. PPW is supplemented by other TANs which provide additional detail on a variety of topics. Of particular relevance to this case are: TAN11, Noise; TAN12, Design; TAN18, Transport; and TAN24, The Historic Environment.

37. The Well-being of Future Generations (Wales) Act 2015 is concerned with improving the economic, social, environment and cultural well-being of Wales. It explains that action on climate change benefits both people and communities in Wales, whilst also contributing to the wider global effort to tackle the causes of climate change and reduce its effects.

38. The Welsh Government's Policy Statement 'Local ownership of energy generation in Wales – benefitting Wales today and for future generations' (2020) encourages the delivery of benefits to communities from renewable and low carbon energy projects. Nevertheless, it is clear that planning decisions must be based on an assessment of the impacts of the Proposed Development, irrespective of who the applicant is. Welsh Government "Guidance for developers, local communities and decision makers – Local and shared ownership of energy projects in Wales" (June 2022) encourages engagement between developers and local stakeholders.

39. The Welsh Government Energy Generation in Wales: 2021 recorded that renewables in Wales generated the equivalent of 55% of Wales' electricity use against a target of 70% by 2030 and note that deployment of renewables had slowed in Wales and the UK since 2015.

40. In early 2023 the Welsh Government consulted on its Review of Wales' Renewable Energy Target. It identified a potential 'pipeline' of approximately 1.7GW of renewable energy from on-shore wind and solar-photovoltaics (PV) as part of an overall pipeline which was estimated as 4.2GW, which is described as 'healthy' and, if deployed, would

approximately double current generation. However, it confirmed that it would not be enough to match future Welsh electricity demand, which is growing.

41. On 14 July 2023 the Minister for Climate Change adopted revised Welsh energy targets 'to meet the equivalent of 100% of our annual electricity consumption from renewable sources by 2035, and to continue to keep pace with consumption thereafter'.

Local Policy

42. In terms of the Caerphilly LDP the site lies within the Northern Connections Corridor as well as the Southern Connections Corridor and is located wholly within the Mynydd Eglwysilan Special Landscape Area (SLA) (Policy NH1). The following LDP policies and guidance documents are considered to be of relevance to the application:

- Policy SP2 - Development Strategy - Development in the Northern Connections Corridor
- Policy SP3 - Development Strategy - Development in the Southern Connections Corridor
- Policy SP5: Settlement Boundaries
- Policy SP6: Placemaking
- Policy SP8: Minerals Safeguarding
- Policy SP10: Conservation of Natural Heritage
- Policy CW1: Sustainable Transport, Accessibility and Social Inclusion
- Policy CW2: Amenity
- Policy CW3: Design Consideration Highways
- Policy CW4: Natural Heritage Protection
- Policy CW6: Trees, Woodland and Hedgerow Protection
- Policy CW15: General Location Constraints
- Policy CW19: Location Constraints – Rural Development and Diversification
- Policy CW22: Locational Constraints, minerals
- Policy NH1: Special Landscape Areas
- Policy NH3: Sites of Importance for Nature Conservation (SINCs)

Supplementary Planning Guidance

• LDP4 - Trees and development
• LDP6 - Building Better Places to Live
• LDP10 - Buildings in the countryside
• Planning Guidance for Smaller Scale Wind Turbine Development Landscape and Visual Impact Assessment Requirements dated April 2015
• Caerphilly County Borough, Smaller Scale Wind Turbine Development - Landscape Sensitivity and Capacity Study Final Report dated November 2015

43. In terms of the Rhondda Cynon Taf LDP, the part of the site in Rhondda Cynon Taf is largely within the Taff Vale Eastern Slopes SLA. The following LDP policies and guidance documents are considered to be of relevance to the application:

- Policy SSA 23 'Special Landscape Areas'
- Policy CS 10 Minerals
- Policy CS 2 'Development in the South'
- Policy AW2: Sustainable locations
- Policy AW 5 'New Development'
- Policy AW 6 'Design and Placemaking'
- Policy AW 7 'Protection and Enhancement of the Built Environment'

- Policy AW 8 ‘Protection and Enhancement of the Natural Environment’
- Policy AW 10 ‘Environmental Protection and Public Health’
- Policy AW12: Renewable and non-renewable energy
- Policy AW13: Large windfarm development
- Policy AW 14 ‘Safeguarding of Minerals’

Supplementary Planning Guidance

- Design and Placemaking
- The Historic Built Environment
- Nature Conservation
- Planning Obligations
- Access, Circulation and Parking
- Employment Skills

The Case for the Applicant

44. The application, on submission, was supported by an ES with a Non-Technical Summary, and several other documents including a Planning Statement, Design and Access Statement, a Collaborative Benefits Report, Socio-Economic Appraisal and evidence of pre-application consultation efforts. The submission also includes a written statement and Common Land Report (including appendices) to support the Common Land applications as well as a Planning Statement to accompany the change of use application at Maes Diofal.

45. The ES describes the site and its designations, the proposal, the planning Policy context, and the wind energy need. It explains the assessment process and methodology, including scoping and consultations. Site selection, including alternatives, and project evolution are described. It includes topic chapters on: access, traffic and transport; landscape and visual impact; geology, hydrology, hydrogeology, and peat; ecology; ornithology; noise; cultural heritage; mining, aviation; climate change; and shadow flicker. The assessments include consideration of cumulative impacts and the effect of mitigation measures. A full list of all mitigation and enhancement measures is set out in appendix A to the mitigation and enhancement Hearing Statement which also sets out where the mitigation is to be secured through planning conditions.

46. Each chapter is accompanied by Figures and Appendices providing supporting information, plans and illustrations. Surveys for ecology, peat depth, noise, bats, badger, water vole, otter and dormouse, are provided. The appendices include a borrow pit appraisal, outline Construction and Environmental Management Plan (CEMP), Transport Assessment, Transport Management Plan, Flood Consequence Assessment (FCA), Private Water Supply Assessment, Drainage Statement, Peat Slide Hazard Risk Assessment, Outline Peat Management Plan, Groundwater Dependent Terrestrial Ecosystems Assessment, Avian Technical Report, Collision Risk Modelling Report for birds, Noise Assessment, Archaeological Assessment and Settings Appraisal, Geophysical Survey Report (archaeological), Geo-Environmental Desk Study and Mining Risk Assessment, Coal Mining Report, Field Survey Summary Report and Groundwater Laboratory Test Results, Aviation Lighting and Mitigation Report, Carbon Balance Assessment and Shadow Flicker Assessment Report.

47. The applicant responded to my request for further information in November 2023 (the Regulation 15(2) Response). This information comprised responses to queries on landscape and visual impact; ecology and trees; cultural heritage, noise, impacts on

public rights of way; impacts on geology, hydrology, hydrogeology and peat; mining; and a response to topics raised in consultations and objections. Appendices provided information on scheme design and turbine scale; additional visualisations from Pontypridd and updated wirelines; an arboricultural impact assessment; engagement with NRW, archaeological information – LIDAR survey, TV and Telecoms assessments. An Outline Borrow Pit Restoration Plan was provided in the applicant's response to Welsh Government Soils Unit dated 18 December 2023.

Benefits of the Scheme

48. The Planning Statement and Policy Hearing Statement refers to International commitments, and UK and Welsh Government legislation and policy on climate change. Recent developments include: The United Nations (UN) Statement relating to the COP28 Agreement outcome for parties to triple renewable energy capacity by 2030; Climate Change Committee (CCC) Report on COP28: Key Outcomes and Next Steps for the UK (January 2024); the adoption by Welsh Government on 14th July 2023 of a target of 100% electricity from renewable sources by 2035, the requirements under the Environment Wales Act 2016 to reduce carbon emissions by 63% by 2030 (en route to 89% by 2040 and net zero by 2050).

49. There has been a considerable fall in deployment of renewables in Wales. Given that wind energy is a key technology (and the cheapest to deploy) driving the new 100% renewable electricity target for 2035, it is imperative that the deployment rate increases in order to attain that target and also to provide the foundation for reaching Net Zero. The trajectory, in terms of the scale and pace of action to reduce emissions, is steep and it is essential that rapid progress is made through the 2020s. UK Energy White Paper and the CCC forecast that electricity demand is expected to grow substantially.

50. Decisions through the planning system must be responsive to this situation. Decision makers can do this by affording substantial weight to these energy policy objectives in the planning balance. The various legislative interventions and statements of Government policy are material considerations of relevance that should be afforded weight, and indeed increasingly greater weight given the statements from the UN in Summer 2023 and in light of COP28 commitments made in December 2023. It must follow that the need case is to be afforded significant weight in the planning balance. The way that decision makers can do that is by properly recognising the seriousness and importance of energy Policy related considerations in the planning balance. Wales will only achieve its Policy and statutory targets if renewable energy development is deployed at scale and at pace.

51. The scheme's benefits are:

- An installed Capacity of 92.4 Mega Watts (MW) – would power up to 82,000 households per annum.
- Carbon dioxide savings of 124,658 tCO2e per annum, which is 5,424,918 tCO2e over the 45-year operational life of the proposal.
- Construction could deliver £18.8 million Gross Value Added (GVA) and 294 years of employment across South Wales; and £26.4 million GVA and 405 years of employment across Wales. During operation there could be £1.1 million GVA and 14 jobs in South Wales.
- Collaborative Benefits Report explains how an annual community benefit fund of £7,500 per MW (index linked to match inflation) would be provided, which will exceed £30 million over the lifetime of the project. The governance of the Community Benefit Fund is set out in the CBR. In summary, the Community Benefit Fund (CBF) would be formed as an incorporated charitable entity, regulated by the Charity Commission. The

CBF would be separate to Bute Energy and would deploy the funding to meet the needs of the communities.

- Net Benefit for and enhancement of biodiversity on site through a Habitat Management Plan.
- Proposed recreation to improve access to quality green space and enhance participation in recreational activities, as set out in the Strategic Recreational Framework
- and the provision of Heritage Interpretation measures on site.

Landscape and Visual Impact

52. The nationally designated landscapes are Bannau Brycheinog National Park, which is 17.4 Km to the north of the closest turbine. The Park's special qualities and relevant management plan/Local Development Plan content are described in detail. The registered Historic Landscapes are Gelligaer Common 4 km to the north-east and the Rhondda which is approximately 5 Km to the west. The special landscape areas include Mynydd Eglwysilan and Taff Vale Eastern Slopes – where the site is located and 16 others within 2 Km to 7.5 Km from the site (10 within Rhondda Cynon Taf, 4 in Caerphilly and 2 in Merthyr Tydfil Council areas).

53. Part of the site (and 11 of the proposed turbines) is located within PAA 10 in FW, and therefore, the Welsh Government has modelled the likely impact of turbines on the landscape here and has found it to be capable of accommodating wind turbine development (with assumed tip heights of 250 m) in an acceptable way. The western cluster of 3 turbines is adjacent to, but outside the PAA. The methodology used in defining the boundaries of PAAs for Wind Energy specifically considered the intervisibility between nationally designated landscapes and wind turbines up to 250 m tip height. National policy acknowledges that there are likely to be some resulting significant landscape character effects, therefore landscape character change as a result of turbines within PAA 10 is acceptable in principle.

54. The assessment of likely effects on the character of the landscape, including that within the BBNP, is presented in detail in Appendix 6.4 Landscape Assessment Table 2 and summarised in Table 6.12 in Chapter 6 of the Environmental Statement (ES). This assessment is based on landscape units derived from Landmap and draws on information contained within the detailed Landmap records as well as observations in the field. The assessment concludes no significant effects on the character of the BBNP.

55. Appendix 6.6 of the ES sets out the assessment of effects on the special landscape qualities of the BBNP, drawing on the special qualities defined in the Park's Management Plan, and concludes that the Proposed Development would not detract from the special qualities of relevance to the landscape that are set out in the Management Plan, which in summary are: the diverse landscape, sweeping uplands, green valleys, dramatic waterfalls, ancient woodland, caves, forests, reservoirs or spectacular and distinctive upland landforms. It is only the views south from the National Park that would be affected by the Proposed Development, and only in clear atmospheric conditions. The Proposed Development would add to the man-made features visible from the Park, rather than taking away from those fundamental features and qualities that define the BBNP. There would be no significant effect on the special qualities as defined for LCAs 7 and 9 above. The Applicant stands by its professional judgement on levels of effect reported in the ES which reflect the fact that while the proposed turbines would be visible in views south in clear conditions they would not fundamentally and significantly alter the key characteristics of the BBNP landscape, or its special qualities.

56. Viewpoints 30 and 32 are located 20.7 km and 27.9 km respectively from the Proposed Development. At this distance the Proposed Development is only likely to be visible part of the time. Nevertheless, in the clearest conditions the Proposed Development would be seen in views south. It would be seen in the context of other existing wind energy, and other development types – including Pen Bryn Oer wind farm, overhead electricity lines (with supporting pylons) and business park buildings from viewpoint 30 and the clusters of Fforch Nest/ Pant y Wal and Mardy/ Mynydd Bwllfa/ Lynfi Afan/ Pen y Cymoedd and Maesgwyn from viewpoint 32. These existing developments are closer to the viewpoints than the Proposed Development, so if the existing developments are not visible due to atmospheric conditions, it follows that the Proposed Development would also not be visible. The Applicant stands by the professional judgement on levels of effect reported in the ES which reflects the fact that while the proposed turbines would be visible in a small part of the views south in clear conditions, they are unlikely to significantly alter the enjoyment associated with visiting and walking in the Bannau Brycheiniog.

57. NRW states in their response “We advise T1-3 (the ‘western cluster’), which lies outside of the PAA, would exacerbate the harm by extending the impact across a wider field of view. These turbines would appear as a separate and additional wind turbine development to that comprising T4-14 (the ‘eastern cluster’)”. The Proposed Development sought to identify a layout of turbines that sits as comfortably as possible on the skyline. The Proposed Development is in two turbine groups, which is thought to be a better design solution than one larger ‘straggling’ or unevenly spaced group (‘outlying’ turbines and uneven visual densities of wind turbines have specifically been avoided as far as possible given other constraints). Even if the western group were to be omitted, given the proximity of the PAA for large scale wind energy development to the BBNP, it is considered likely that other similar proposals will be put forward in a similar area in the near future. Whilst it is recognised that each scheme would be considered on its own merits, there are many areas within PAA 10 (which through FW have been determined to be ’capable of accommodating development in an acceptable way’) that are closer to the BBNP than the Proposed Development that could come forward for development, with equivalent or larger size turbines.

58. The removal of T1, T2 and T3 from the Scheme would result in the removal of significant effects on receptors in the Pontypridd valley. However, for the majority of those that remain there would be no reduction in the significance of the effects, but some reduction in the extent of the identified adverse effects. As against this, there would be a material and meaningful reduction in the benefits associated with the scheme. For the avoidance of doubt, the Applicant is not proposing an amendment to or variation of the Proposed Development since it is considered to accord with local and national Policy. [Regulation 15(2) Response Appendix 1].

59. Caerphilly County Borough Council (CAERPHILLY CBC) criticises the Landscape and Visual Impact Assessment (LVIA) in its classification of the landscape as large scale. Its judgement of landscape scale appears to be based on the Caerphilly County Borough Smaller Scale Wind Turbine Development Landscape Sensitivity and Capacity Study that identifies large landscape units that cover many types of landscape. The classification of medium scale in this document is likely to be an ‘average’ of the different scales of landscape found within the host Landscape Unit. The area containing 9 of the turbines is described as large scale in LANDMAP information.

60. The rationale for the design and guidance followed is set out in Chapter 3 of the ES and a larger scale turbine was selected to maximise energy generation while achieving a well-designed scheme that sits as comfortably as possible on the skyline, with a fewer number of turbines. Many more smaller turbines would be needed to deliver the same capacity as

the Proposed Development, this would result in more cluttered views than fewer larger turbines.

61. Medium and large-scale landscape effects are defined in Table 1.6 of the LVIA Methodology. The extent of these largest scale effects is typically experienced up to approximately 1.5km from the turbines. Medium scale effects are likely to occur beyond 1.5km and up to approximately 5-7km from the turbines (from areas where turbines are visible). The Applicant stands by the assessment provided in the LVIA and disagrees with Caerphilly CBC that the 'major' zone of landscape impact would extend up to 7km.

62. Views from local communities have influenced the layout during the design process. The effects identified are not unusual or unexpected for a development of this scale in the type of landscape associated with PAA10. This is a well settled part of Wales and therefore it is unavoidable that visual receptors would see wind energy development in this PAA. This does not equate to unacceptable effects – acceptability is a matter of planning judgement and balance.

63. There would be significant visual effects during both the construction and operational stages from some of the local communities within 5km of the proposed turbines. Major effects are predicted on views from the edge of Cilfynydd (Heol Mynydd and the eastern ends of Cynon View and Hilltop Avenue), the terraces situated on the elevated slopes of the Aber valley and located at the northern end of Senghenydd, and the northern end of the Fford Las cul-de-sac in the north of Abertridwr. There would also be mostly major-moderate (significant) effects on some of the elevated streets in Cilfynydd, Abertridwr, Hengoed, Gelligaer, Maesycwmmer, Nelson, Caerphilly, Glyncoch, Abercynon, Treharris and Blackwood. The reason for finding moderate effects on parts of Caerphilly, Oakdale and Blackwood is related to the distance from the proposed turbines.

64. The LVIA identifies a major visual effect from the residential terraces situated on elevated slopes and located at the northern end of Senghenydd:

    • The north-west facing properties within Senghenydd east (along Coronation Terrace, Alexandra Terrace, Upper Brynhyfryd Terrace and High Street) – turbines would be oblique in primary views from these properties, but they would become a defining element of views due to the close proximity and presence in two directions from the properties (see viewpoint 3);

    • West facing properties within Senghenydd east (along Coronation Terrace, Alexandra Terrace, Upper Brynhyfryd Terrace and High Street) – from where the western group of turbines would be a new key element in views from the primary outlook from these properties;

    • Properties within Senghenydd west (along Parc Terrace and Grove Terrace in the north and Station Terrace in the south) – from where the eastern turbine group would become a key new element in views from the primary outlook of this property group (see viewpoint 5);

    • The detached area containing Cenydd Terrace, Graig Terrace, Phillips Terrace and Woodland Terrace - from these areas the turbines would not be in the primary views from the properties, but the turbines would be clearly discernible from the front gardens and may be seen obliquely from more than one aspect of the properties (as well as from end of terraces).

65. The LVIA also identifies a major effect from the northern end of the Ffordd Las cul-de-sac in the north of Abertridwr, and a moderate-major effect from the edge of the Garth Estate (Viewpoint 6) and the terraces situated on elevated slopes on the south-western edge of Abertridwr, and the north-west facing properties on Ffordd Las in the north of Abertridwr.

66. The views from residential properties described above are stationary views, most relevant to individual residents and therefore a matter of private amenity (i.e. relating to the living conditions associated with a dwelling). Paragraph 5.2 of the Landscape Institute's Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA) states that 'The threshold at which a residential property's visual amenity becomes an issue of Residential Amenity has sometimes been described as the point when 'the effect(s) of the development on the 'private interest' is so great that it becomes a matter of 'public interest'', the public interest being the overall welfare of the general public. Whilst significant visual effects are acknowledged in accordance with the RVAA guidance the impacts of the Proposed Development are not considered to be so great as to be a matter of public interest.

67. When moving around these settlements, views of turbines would be intermittent and not always present. Views would generally be restricted by buildings and vegetation except where roads face directly towards turbines. Google Earth has been interrogated to provide the following description of moving through the two settlements on the main route that passes through them (the B4263).

68. When entering Abertridwr at its southern edge the three turbines of the western group would be visible for the first 600-700m, ahead on the hill to the north-west over 3.5km away (the eastern group turbines would not be visible). Visibility of turbines would be lost as the road bends left at Thomas Street and there would be no views of turbines until the road turns north onto the High Street at which point 3-4 of the eastern group of turbines would be seen on the hilltop ahead just over 2km away. As the road leaves Abertridwr sight of the turbines would be lost again, being regained for a short stretch (approx. 40m) at the junction with Caerphilly Road in Senghenydd where the road swings north-west and aligns with the western turbine group on the hillside ahead. Views of turbines would be lost again as the road enters a stretch named 'Commercial Street' because the road is directed north-west between the two groups of turbines.

69. The next sighting of turbines would be from the War Memorial (clock) in the centre of Senghenydd where the orientation of Gwern Avenue is such that there would be views of the western group of turbines on the hill along this side road. Senghenydd Community Centre is located on Gwern Avenue and from outside the front of the Senghenydd Community Centre one or two of the turbines of the western group are likely to be visible on the skyline when looking west up Gwern Avenue, but the eastern group would be screened behind buildings. The three western turbines would be seen through gaps between buildings and vegetation from Commercial Street, although they would be approximately 1.7km away from Commercial Street. As the road swings to the right at the top of Commercial Street the blades of one of the eastern turbines may just be visible above vegetation that lines the road.

70. On entering the Senghenydd National Mining Memorial and Garden the three turbines of the western group would be visible on the hilltop ahead (to the west), just over 1.5km away. Once in the Memorial Garden there would likely be views to parts of 4 turbines to the north-east and the tops of the three turbines of the western group to the west at a distance of at least 1.3km away.

71. In summary, turbines would be intermittently visible from Abertridwr and Senghenydd, but they would not 'dominate' the settlements, especially when moving around them or travelling through them. The key locations with static views are summarised above.

72. Additional views from Pontypridd: Old Bridge and Ynysangharad Memorial Park have been provided as requested by Councillors from Rhondda Cynon Taf. There would be views of turbines 1-3 from the bridge and parts of the park, resulting in a medium scale change in view. This would cause a moderate (significant) effect at this location.

73. Major effects are predicted for users of open access land, PROWs and promoted walking routes within the Site. There would also be large changes to views for receptors who are outside the Site but typically within 2.5 km and have open views where turbines are in a direct line of vision, or affect a substantial part of the view, or and would provide contrast with the existing view. There would be a major effect for panoramic viewpoints in Parc Penallta Country Park and significant effects for visitors to Llancaiach Fawr Manor grounds and Caerphilly Castle's accessible towers.

74. There would be no additional cumulative effects over and above those set out in the LVIA for the 3 scenarios that have been considered in the ES. Two recent proposals for wind energy DNS developments that missed the cut-off point for the ES have been assessed for cumulative effects. Neither would interact with the Proposed Development to the extent that it would change the cumulative effects arising from the Proposed Development as reported in the ES.

75. The RVAA describes the change in view likely to be experienced by residents at the closest properties to the Proposed Development. The approach follows relevant Landscape Institute guidelines and has also been informed by numerous decisions made following public inquiries into wind energy proposals in the UK. 47 properties or property groups within 2km of the proposed turbines were assessed. 14 properties/ property groups would experience a high magnitude of change to views and 21 are expected to experience a 'medium' magnitude of change. Due to the elevated position of the Proposed Development, many of the closest properties are situated on the slopes surrounding the site and therefore their primary outlook is often directed over surrounding valleys and away from the site. Conversely, many of the more distant properties are situated on opposite valley slopes with their main views angled towards the scheme. In terms of the relevant test the RVAA concludes that none of the properties would become an unpleasant place to live because the turbines would be so overwhelming, unpleasantly encroaching or inescapably dominant from any property (or render the property an unpleasant place to live).

76. A significant visual effect has been judged to occur at dusk/night from Caerphilly Common when the turbine aviation lights are switched to their brightest mode. However, a lighting design has been proposed to minimise the number of lit turbines whilst maintaining flight safety. Taking into account Met Office data, the lighting would be set at a higher intensity (2,000 candela (cd)) for 12% of the time when visibility is low, and lower intensity of 200cd for 88% of the time when visibility is good, and the lights are not obscured by cloud.

Ecology and Ornithology

77. The applicant has responded to the changes to Chapter 6 of PPW. Although not a requirement when the application was submitted, the applicant has prepared a Green Infrastructure Statement (GIS). Chapter 3 of the GIS addresses compliance with new Policy.

78. Part of the site is within the Mynydd Eglwysilan SINC. There will be a direct and indirect loss of around 64 Ha of habitat within the SINC as a result of construction of the proposal. This would be a major adverse effect and significant.

79. As set out in the GIS, the Applicant has followed the stepwise approach in refining the Proposed Development, avoiding impacts on statutory designated sites and applying the iterative and sequential approach. Based on this approach and through utilisation of the DECCA framework, the Applicant has developed and proposed a series of biodiversity net benefits which would result from the proposal to support both the site and its wider context, all of which create a more resilient and better-connected ecosystem. This approach is also in accordance with the duty under section 6 of the Environment (Wales)

Act 2016 with regard to maintaining and enhancing biodiversity (as specifically referenced in PPW 12 at paragraph 6.4.10).

80. Through consultation and meetings with the ecologists for both Councils it has been established that the SINC is in a poor condition due to poor management on the common. A major component of step 3 mitigate and restore is to improve the management of the land. An agreement has been reached with users of the common to facilitate proper management to enhance the SINC habitats to improve habitat condition through management of grazing, scrub control and cessation of potentially harmful activities. The focus of this would be on ffridd habitats to enhance a minimum of 390.82 Ha within the SINC. An additional net benefit for biodiversity would be incorporated by enhancement of 36.36 Ha off-common Rhos pasture and to enhance habitat for marsh fritillary butterfly.

81. Overall, the Proposed Development would deliver positive enhancements (net benefit for biodiversity) which are proportionate to the scale and nature of the proposal. This is referenced in section 3 of the Applicant's GIS and in Appendix 8.7 of the ES (Outline Habitat Management Plan and Net benefit for Biodiversity Assessment).

82. In following the step-wise approach, it is considered that the positive multifunctional effects on biodiversity (and the benefits from the proposed Strategic Recreational Framework) and the resilience of ecosystems outweigh any remaining adverse impacts. Overall, given all of the above and in light of the expert ecological and hydrological evidence as set out by the Applicant's expert witnesses on these topics, it is considered that the Proposed Development accords with the provisions of PPW 12.

83. The siting and design of the Proposed Development is entirely appropriate and consistent with the step-wise approach described in the revision to Chapter 6 of Planning Policy Wales 12 (PPW), in respect of peat and soil resources. The site is within an area where only small-scale, localised areas of peat are present. It is incorrect to define the Site, as a whole, as a 'peatland site', and the identification of the Site as being suitable for the Proposed Development is consistent with the first step ('avoid') of the step-wise approach. Site-specific peat surveys have identified some localised areas of the site where peat is present. Those small-scale and localised areas of peat have been almost entirely avoided in the iterative design of the Proposed Development. This also aligns with the first step ('avoid') of the step-wise approach.

84. Although the principal aim, in line with the step-wise approach, has been to avoid siting any infrastructure on peat, this has not been possible in all instances due to other environmental and technical constraints, such as those listed in paragraph 3.15 of chapter 3 of the ES. In those instances, again in line with the stepwise approach (Step 2 – minimise), design iteration work has sought to minimise any infrastructure being sited on deeper peat. For example, the northern access track (located between the public highway and T7) necessarily crosses an area where localised peat has been recorded, however it has been routed to target the shallowest peat depths possible taking account of other siting constraints. Mitigation measures including a Peat Management Plan have been provided. This plan includes measures to restore and enhance peatland habitat where appropriate, however as noted above, the presence and distribution of peat at the site is fairly limited and the opportunities for substantial restoration of degraded/modified peatland habitats are similarly limited.

85. NRW has no remaining objections on the grounds of peat or soil resources. Following meetings with the soils unit of Welsh Government, the only remaining issues are the hardstanding to Turbine 10 and the northern access route. On the basis of the other constraints identified and recognising the importance of maximising renewable energy generation from the development the T10 hardstanding on an area of peat (average depth

0.5m), which was observed to not be extensive or the location of any active bog habitat, is appropriate and proportionate.

86. In summary, the Applicant maintains that the impact of the Proposed Development on peat would be negligible. Given that the Proposed Development Site is fundamentally not a peatland site and that the development has been designed to avoid localised pockets of discontinuous peat wherever possible and minimise and/or mitigate impacts in the small number of instances where this is not possible, it is considered that the development accords with relevant Policy, including the step-wise approach described in the revision to Chapter 6 of PPW 12, and good practice.

87. The likely impacts of the Proposed Development have been considered in accordance with guidance provided within British Standards. This includes the provision of a tree survey and Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS). These have, and would continue to be used, to inform both outline and detailed design.

88. The Proposed Development crosses through a single area of ancient woodland. In this instance construction work would be undertaken using Horizontal Directional Drilling (HDD) as a measure to retain woodland (with the cabling passing underneath the woodland) without the need to remove trees. This methodology would ensure that construction work would be undertaken without the need for any potentially damaging operations and without any loss or deterioration to the ancient woodland site.

89. The AIA has identified a potential adverse impact to two high-quality trees (T65 and T116) and one moderate-quality tree (T64). Adverse impacts to these trees would be avoided by micro siting the proposed access track outside of their root protection areas during detailed design. This would ensure that trees, which make a significant contribution to the area, are therefore retained.

90. The AIA acknowledges that two moderate-quality trees, one low-quality tree and one low-quality tree group would need to be removed. It further acknowledges that one moderate-quality tree group, two low-quality tree groups and one very-low quality wooded area would need to be removed in part. These removals are unavoidable but would be compensated for through a robust programme of replacement tree planting. New tree planting would occur at a minimum ratio of three new trees for every tree which is removed and would utilise native species of local provenance. The long-term management of these trees would be secured through their inclusion in the final Habitat Management Plan.

91. In response to the concerns of Caerphilly CBC and objectors, the AMS has been submitted to provide the technical information about the approach that would be adopted to ensure retained trees are adequately protected during construction. The submission of a final AMS for the approval of the Local Planning Authority can be secured by conditions.

92. A range of ecology surveys were undertaken between 2020 and 2022 to define the ecological baseline conditions for the Proposed Development. The surveys included extended Phase 1 habitat surveys, Phase 2 (National Vegetation Classification) surveys, bat roost surveys, bat activity surveys involving both static detector surveys and Vantage Point surveys for noctule bats, as well as surveys for badger, otter, water vole and dormouse.

93. The bat surveys found no evidence of roosting bats within any features that lie within 250m of the proposed turbines or within 20m of the access route and proposed grid connection search area. There was scant or no evidence of other species – otter, water vole, dormouse, badger or Great Crested Newt in the area.

94. Data on the bat species present within the site and patterns of bat activity. This information was used to define the overall risk to bats and informed the proposed outline mitigation strategy. Standard mitigation is proposed to reduce the impact of the proposed development on the local bat population. Where the risk to bats is medium or above, a curtailment strategy is to be implemented between 1 April and 31 October each year. This will restrict the operation of the turbine at times of the day/year when bats are active and when weather conditions are optimal for bats. The approach to mitigation has been agreed with NRW and is to be secured through planning conditions.

95. Dormouse have been identified in surveys completed in 2023, for an unrelated project for the National Grid substation that lies beyond the Site to the north. While extensive surveys of the Twyn Hywel site over seven months found no evidence of dormouse, precautionary measures, detailed in a Species Protection Plan (SPP) incorporated into the Construction Environmental Management Plan (CEMP) and Habitat Management Plan (HMP) will be implemented during any small-scale habitat removal and management on the Site.

96. In line with the current guidance, a suite of ornithological surveys was adopted for the purposes of assessing the avian baseline conditions for the Proposed Development. The effects on bird species were assessed and with standard mitigation the predicted effects were considered to be minor adverse or negligible and therefore not significant for all important ornithological features.

97. The RCTCBC Ecologist highlighted a concern that the predicted (or modelled) annual collision rates for wintering golden plover vary from those for another proposal nearby (specifically DNS/3280378 Mynydd Y Glyn windfarm near Porth). Further information was requested on the appropriateness of the standard Collision Risk Modelling methodology in evaluating effects on this particular species and an explanation of the difference in the results cited in the ES report for a comparable project where non-breeding golden plover are present was provided.

98. The differences were in the Collision Risk Modelling results were explained and the availability of alternative land in the area and in other parts of the site were set out. The latter was to address the potential cumulative effects of loss of roost locations in the area. Both the Council's Ecologist and NRW have confirmed that they have no remaining concerns.

Cultural Heritage

99. The assessment has taken account of relevant planning Policy and guidance in particular TAN 24 and the best practice guides produced by Cadw. The impact of the development on heritage assets has been informed by a desk-based assessment of all relevant sources of information held by for example Glamorgan Gwent archaeological trust (GGAT), Cadw, the conservation officers of the local councils, archaeological records held by the Royal commission for ancient and historic monuments in Wales, the National monuments record Wales data, NRW lidar data, et cetera. All designated and undesignated heritage assets within the site and the study area that are known have been identified. The potential for unknown historic assets has been assessed in accordance with a written scheme approved by GGAT. This includes geophysical survey of the turbine bases and hard standings. The results of previous archaeological investigations within the site and study area have been taken into account, including consultation replies that refer to the work of local amateur archaeology surveys.

100. The layout of the development has taken account of potential setting effects for Caerphilly Castle, the cross ridge Dykes scheduled monument and Senghenydd Dyke, an unscheduled monument of National significance. This has increased the distance

between turbines and the heritage assets. The access tracks have been rooted to avoid impacts to the cross ridge Dykes and the upstanding parts of Senghenydd Dyke. The construction effects are assessed and it is concluded that after mitigation the effects would not be significant. The importance of protection measures to ensure accidental damage does not occur to heritage assets is explained. This matter would be covered by the CEMP.

101. The design of the Proposed Development has taken account of the known historic assets of all periods within this landscape and has avoided physical impacts to them so far as possible. The proposed turbines would add a new layer of human occupation to this landscape and the proposed archaeological mitigation would further reveal evidence of the earlier activity where impacts cannot be avoided. The field pattern within the Senghenydd and Cwm yr Aber aspect area would be unaffected by the Proposed Development.

102. The operational effects on heritage assets in terms of changes to the setting have been considered as set out in the ES Chapter 11. Effects on the Old Bridge and Ynysangharad Memorial Park in Pontypridd have been assessed in response to concerns raised by the town Council and councillors. The conclusion is that the only significant effects on settings outside the site would be moderate adverse effects on the setting of Caerphilly Castle and Llanbradach Fawr house and barn – which is comprised of 2 listed buildings. Mitigation arrangements and offsetting measures are set out. Cadw and GGAT have confirmed that they agree with the methodology and the conclusions reached on impacts of the proposal on its own.

103. The only potential cumulative impact that has been raised is impact on Caerphilly Castle in terms of the cumulative effect of the proposal with the Cwm Ifor solar farm. As set out in the Statement of Common Ground (SOCG) between the applicant and Cadw, there is a difference of opinion. Cadw considers that there would be a cumulative impact, whereas the applicant considers that this would not be the case.

Noise

104. An assessment of the noise levels resulting from the introduction of the proposal in terms of the potential for operational and construction effects has been undertaken. Construction noise has been discussed with reference to BS 5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites. The operational noise assessment has been undertaken according to the recommendations of ETSU-R-97, The Assessment and Rating of Noise from Wind Farms (ETSU-R-97) and the best practice guidance published by the Institute of Acoustics, A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise and its associated Supplementary Guidance documents. Extensive baseline/background noise monitoring has been undertaken in accordance with the guidance documents referenced above.

105. Construction of the Proposed Development is expected to meet typical noise limits for activities of this type. The operational and cumulative noise assessment indicates that predicted turbine noise levels would meet the requirements of ETSU-R-97 without the need for mitigation/curtailment. Appropriate control measures can be put in place through the imposition of planning conditions to ensure this would be the case in practice. As a result, the noise effect associated with the cumulative and isolative operational effects of the Proposed Development are considered not significant.

106. A question was raised in relation to the application of the upper daytime noise limit. This was chosen at the higher value in ETSU-R-97 because of the benefits of renewable energy generation that would be curtailed if a lower limit were applied. Information has been provided that shows the application of higher limits at other windfarms. Discussions

have taken place with environmental health officers from both councils, and it was agreed that a daytime noise limit can be set at the greater of 38 dB LA90 or plus 5 dB above background, with the exception of 4 noise limit locations in CAERPHILLY CBC where the maximum daytime lower limiting value of 40 dB LA90 or plus 5 dB above background can be applied. However, this would not occur under prevailing wind conditions. It should also be noted that that the predicted noise levels presented assume downwind propagation in all directions which cannot occur in practice. So the figures are very much a worst case scenario.

107. ETSU-R-97 allows for potential greater noise impacts to be considered at properties that are financially involved in a scheme, as those who benefit from the scheme would be more tolerant of adverse impacts. The applicant has clarified the names of the 5 financially involved properties in the relevant hearing statement and that Maes Diofal would not be in residential use if the scheme proceeds to construction.

Impact on PROW

108. The application for the Proposed Development includes a proposed Strategic Recreation Framework (Appendix 1 to the Design and Access Statement), the aim of which is to provide an indication of the potential options for improving recreational access to the Proposed Development site. The design for Proposed Development recognises that the site is largely open access land and that the wind turbines would be accessible to the public. The site access tracks would provide an opportunity for people who may otherwise be restricted by the ground conditions to access the site and thereby make use of the open access land. This benefit is recognised in Caerphilly CBC's LIR where it is noted that 'the public would benefit from improved surface to the byways, which presumably would also be maintained for the life of the development for access with maintenance vehicles.' The use of existing tracks and byways was considered as part of the infrastructure design process.

109. Technical Advice Note 8 (TAN8) is a Policy document that was revoked in February 2021. There is no extant Policy that requires a stand-off distance between a public right of way and a wind turbine. Wind turbines are a familiar sight in Wales and most parts of the UK, with sites actively encouraging recreation close to the wind turbines through walking, biking and horse riding.

110. Any potential oversail of a highway or public right of way can only be determined after the layout of the turbines, including any micro-siting, has been designed post consent. The point raised as to whether oversailing of a highway can cause an obstruction is not a matter which can be resolved as part of the Examination process for the application and would be a matter for the relevant highway authority to determine following consent. The appeal decision referred to were not comparable to the factual background of the Site. In the case of the Proposed Development a number of the turbines are located on land on which the public has a right to access, irrespective of any highways or public rights of way. The public would be able to walk right up to these turbines and touch them. Many of the rights of way are simply tracks worn in place by passage. In respect of the BOAT in the eastern part of the Site this is in very poor condition and in places is virtually impassable by vehicles.

Impacts on Coal Tips and Drainage

111. The possible impacts on land stability, and of past coal mining activity, including the presence of mining tips near the site has been assessed in the ES. With mitigation the effects were found to be minor and not significant.

112. The design of the proposed infrastructure has been developed by geotechnical engineers, drainage and hydrology experts. The proposed infrastructure is deliberately

positioned away from the coal tips, and measures including drainage management and construction management protocols are included as part of proposals to avoid impacts to the tips. The design of access roads and other infrastructure from early in the project development process has been maintained as a core driver the avoidance of effects to the coal tips on both sides of the Proposed Development site, at the Albion tips and Llanbradach tips. This has included removal of a turbine from the initial design, the use of existing tracks wherever possible and the installation or upgrade of sustainable drainage at the site which facilitates infiltration into the ground rather than run off. The drainage strategy for the development has been developed to provide infiltration and control of runoff so that greenfield conditions are maintained. The coal tips have been specifically considered and taken into account in developing the drainage strategy, resulting in a drainage design which exceeds best practice, developed following consultation with Local Planning Authorities.

113. The assessment concluded that the Albion Tip is at low risk from the Proposed Development. This was on the basis that the Albion tip has been subjected to remedial action in the form of re-shaping and the introduction of water control measures. In addition, as explained in ES Paras 12.55 and 12.56, the Lower Albion Tip was subject to subsequent recent remedial action, whereby material was removed, and an enhanced (pumped) drainage system was installed, together with monitoring telemetry. The closest turbine position (turbine 3) is located approximately 700m from the Albion Lower Tip (the part of the tip that gave cause for concern and that was subject to the recent remedial works) and does not directly border the coal tip. The closest elements (T3 and associated hardstanding) would naturally drain north towards the unnamed watercourse which flows north-northwest from there. Importantly, the drainage strategy has been developed to provide infiltration and control of runoff so that greenfield conditions are maintained.

Transport and Access

114. The ES contains a Transport Assessment and Transport Management Plan Report. Automatic traffic count surveys were also undertaken. The majority of the access route to the site is via the motorway and trunk road network to the roundabout and new link road at Nelson. Welsh Government Highways have been consulted and a Statement of Common Ground has been submitted. This confirms that Welsh Government has no objections to the proposal, subject to conditions. Both Councils have no objections to the proposal in terms of traffic. There would be major effects for pedestrians including users of rights of way during construction. It is proposed that mitigation would address these impacts. Mitigation is set out in the Construction Traffic Management Plan, to be secured by conditions. As well as this there would be an Abnormal Load Transport Management Plan, a Path Management Plan, Staff Travel Plan and a wear and tear agreement. The Path Management Plan would contain measures to address interactions between construction traffic and pedestrians, cyclists and horse riders on highways and public rights of way.

Other Matters

115. Chapter 7 of the ES, and associated Figures and Appendices, provide a detailed assessment of potential effects on geological, hydrological, hydrogeological and peat receptors. Good practice mitigation measures are set out in Paragraphs 7.77 to 7.81. These measures include implementation of a number of management plans, prior to and during construction of the development, to prevent, minimise and/or control potential adverse effects on relevant receptors. These plans are detailed below.

116. Construction Environmental Management Plan (CEMP): An outline CEMP is provided as Appendix 4.3 to the ES. The CEMP would be fully detailed and agreed with the planning authority and NRW prior to commencement of construction, and it would remain

a live document during construction, to be updated and amended with relevant lessons learned and additional information as appropriate. Drainage Strategy: An outline Drainage Strategy is provided as Appendix 7.4 to the ES; this has been provided to the Sustainable Drainage System (SuDS) Approving Body for both local authorities, both who have confirmed broad acceptance. The Drainage Strategy would be fully detailed and agreed with the planning authority and SuDS Approving Bodies prior to commencement of construction. Water Quality Monitoring Plan (WQMP): Outline principles and approach to the WQMP are provided in Paragraphs 7.78 and 7.115. The WQMP would be fully detailed and agreed with the planning authority and NRW prior to commencement of construction. Full details of the WQMP would require finalised project design details, informed by pre-construction ground investigation works and dependent on confirmation of matters such as finalised water crossing designs. Peat Management Plan (PMP): An outline PMP is provided as Appendix 7.6 to the ES. The PMP would be fully detailed and agreed with the planning authority and NRW prior to commencement of construction, and it would remain a live document during construction, to be updated and amended with relevant lessons learned and additional information as appropriate.

117. Provision of the outline plans, at this stage, to be fully detailed and agreed with the relevant authorities prior to commencement of construction, is considered to give sufficient information and comfort to the decision-makers on the mitigation and protection measures to be employed and comment on these is welcomed from the Council and other stakeholders. Agreement of detailed management plans pre-construction, secured by appropriately worded planning conditions, is a robust and accepted approach.

118. The CEMP would provide controls on all construction impacts. The CEMP and other plans would provide mitigation for the potential effects of the excavation of borrow pits on surface water features.

119. A Flood Consequence Assessment (FCA) is provided in the ES. Based on the NRW's Flood Risk Map tool it is considered that there is unlikely to be any material flood risk to the Proposed Development. The drainage strategy involves the use of sustainable drainage systems to mimic greenfield surface water drainage and ensure no exacerbation of downstream flood risk. The FCA was undertaken to fully assess flood risk and demonstrate that the flood risks and consequences can be acceptably managed in line with current planning Policy. No material flood risk to the Site is envisaged from the flood sources evaluated. Watercourse crossings would be appropriately sized to ensure no constriction of flows or increased flood risk. This approach would mimic the existing drainage conditions of the area and minimise any risk of overland flows impacting built infrastructure. Representations queried the impact of the development on the flow of surface (overland) water and groundwater, with some specific concern about the effect of the development on drainage from turbines T3 and T4 and the impact this could have on culverts. With respect to potential flood risk from and pollution of small watercourses and water crossing points during the construction phase, a number of good-practice mitigation measures and a shallow groundwater monitoring programme have been proposed to minimise the risk of flooding and pollution impacts. These would be included in the CEMP.

120. In respect to groundwater flow (see Paragraph 7.92 of the ES) the introduction of turbine foundations has the potential to divert groundwater flows within superficial geology, where present. Dewatering of excavations would also likely result in temporary drawdown of the water table in the immediate vicinity of those excavations. Considering the overall groundwater resource at the site and taking account of good practice mitigation measures, which would be captured in the CEMP and secured by planning

condition, it has been assessed that no significant effects on the groundwater resource would result from the construction or operation of the development.

121. A detailed assessment of potential impacts on Private Water Supplies (PWS) from the construction and operation of the Proposed Development has been undertaken and is reported in Appendix 7.3 to the ES. Detailed desk study work, including consultation with both local authorities within whose areas the Proposed Development site is located, was undertaken by the assessment team from 2021. The objections received have been reviewed and responses provided. It has been determined that the assessment as reported in ES Appendix 7.3 is appropriate and robust, and the mitigation measures are appropriate.

122. The details of water supply for the development are not yet confirmed. Any abstraction would require an abstraction licence under the Water Resources Act 1991 if greater than 20 cubic metres per day. As noted in Paragraph 7.78 of the ES, all necessary permits would be sought from NRW prior to the commencement of works on-site.

123. A Shadow Flicker Assessment has been carried out to identify when turbines may have to be curtailed. 40 properties may be affected, with 4 properties potentially experiencing significant shadow flicker effects. Should any residents experience shadow flicker effects at their property, mitigation would be explored to limit shadow flicker at that location, such as vegetation planting to shield the property from the turbine(s). If other measures do not satisfactorily mitigate effects, then the relevant turbines can be shut down at appropriate times and conditions

124. Fixed radio links have been assessed within the relevant report. Consultation with the relevant stakeholders was carried out and any negative impact has been mitigated (see relevant report). Therefore, following the implementation of the mitigation solutions, the Proposed Development is not predicted to significantly impact the telecommunication infrastructure.

125. Effects upon TV reception at Pontypridd and Abertridwr have been assessed in the desk-based television impact assessment (9773T - Twyn Hywel - Desk-Based Terrestrial Television Interference Assessment). These are likely to be low since the proposed wind development is not predicted to interact with the direct line of sight between the dwellings and the relevant relay. Following the commencement of operation, it is good practice to monitor for any potentially affected dwellings for television interference, which could, in turn, lead to a post-construction survey with the aim of investigating and mitigating any issues (as appropriate). This would be secured by planning condition.

126. The effects on climate change have been assessed in the ES. This provides an estimate of the contribution the proposed development will make to saving CO_2 emissions arising from construction, operation and decommissioning. During construction and before operation, the proposal will create more carbon emissions than it removes from the atmosphere. The Carbon balance assessment takes into account all aspects of the construction of the turbines including concrete for the turbine foundations and hardstanding, the materials used for the turbines themselves, and all other associated infrastructure.

127. The payback time of CO_2 emissions has been calculated to be in the region of 1.5 years. This is defined as the length of time required for the proposed development to be considered a net avoid of emissions rather than a net emitter. The proposal along with other windfarms will play an integral part in helping Wales to meet its climate change and energy targets and a major positive and significant effect is identified cumulatively.

Caerphilly CBC and Rhondda Cynon Taf CBC Local Impact Reports (LIR)

128. The following is a summary of the LIR of Caerphilly CBC.

129. It is considered that the LVIA has tended to undervalue the sensitivity of receptors and effects. It is therefore considered that the significant adverse effects would be more widespread than the LVIA finds. Consequently, significant effects would be experienced over a wide number of landscape character areas and visual receptors. Turbines of this height would be out of scale with the medium scale landscape, resulting in both widespread significant landscape and visual impact, with the turbines breaking the skyline and not following NatureScot best practice. This is based on the classification of landscapes in the Caerphilly County Borough Smaller Scale Wind Turbine Development - Landscape Sensitivity and Capacity Study, dated November 2015 (the Landscape Study). It is considered that the study is still a material consideration, irrespective of FW Policy 17. The proposal would change the Landscape character to a landscape character associated with very large scale renewable energy infrastructure, which would have the potential to totally undermine the LDP locally designated Mynydd Eglwysilan SLA.

130. In respect of Senghenydd, Abertridwr, Ystrad Mynach, Penybryn, Gelligaer, Hengoed, Maesycwmmer, Caerphilly, Oakdale, Nelson, South-west of Blackwood, elevated southern areas of Blackwood and The Bryn Pontllanfraith Playing Fields, it would have been expected that all these communities where views are afforded of the turbines would be evaluated higher than moderate significance given the size of the wind farm and the turbines being clearly visible in the skyline.

131. Of the communities, Senghenydd (Viewpoints 3 & 5) and Abertridwr (Viewpoint 6), would experience Major adverse Visual Impact due to the very close proximity to the nearest turbines (approximately 1km). Senghenydd would be visually dominated by the turbines which would be visible from the west and east of the settlement in successive views and enclosing the settlement. The turbine arrangement and proximity has the potential to dominate over the community, being overbearing and out of scale with the settlement pattern and steep valley slopes, above which the turbines are elevated, in turn extenuating the scale and distorting the perspective experienced from the settlement.

132. The proposal is considered acceptable in terms of the effect on living conditions of residents except that the proximity/scale of the proposed turbines would be overbearing on residents (most notably in relation to Senghenydd) as discussed above.

133. The scope of the Heritage Impact Assessment and the assets identified for assessment is also agreed. A section of the Senghenydd Dyke is located within the site boundary. This an important monument worthy of scheduling because it is significant for its evidential and historical value as an example of a large-scale 13th century dyke structure and a vast landscaping achievement, associated with Caerphilly Castle. In terms of impact on the Dyke Caerphilly CBC with the findings of the applicant. The Council considers that there would be a harmful impact to the setting of the Dyke and Caerphilly Castle and as a result harm to the significance of the historic assets

134. There are no highway concerns. The impact on users of PROW should be taken into account. The Council welcomes the use of existing tracks to serve the development and the commitment to improve PROW and recreation access. The ecological conclusions and mitigation proposals are supported. An Arboricultural Impact Assessment (AIA) is required to determine the impacts on trees e.g. Ancient Woodland. As this has now been submitted accompanied by an AMS, this matter has been addressed.

135. The following is a summary of the LIR of Rhondda Cynon Taf (RCT) CBC.

136. The LVIA notes unavoidable significant adverse effects on landscape character within 7.5 km of the site as well as significant visual impacts on local communities within RCT. The attractiveness or not of wind turbines is subjective and they create visual effects by their very nature. The role of the decision-maker is considered the extent to which these effects outweigh the positive benefits of the project. The formal assessment usually considers views of an turbines to be negative however the experience of the individual may often be more nuanced. There would also be significant effects on PROW. These routes are of considerable length and only stretches closest to the Proposed Development would experience significant effects.

137. In terms of birds seven species of high conservation value were assessed in the ES. Assuming standard mitigation measures, the predicted effects were minor adverse or negligible. The Council's ecologist has raised concerns on the cumulative impact of the proposal on golden plover. Upon consideration of the views of NRW and further information provided by the applicant, these concerns have been addressed.

138. It is considered that the impacts on biodiversity can be addressed by condition. Much of the site is within a SINC. The applicant's proposals for enhancement of the SINC are welcomed and the Council stresses the importance of conditions requiring the CEMP and Habitat Management Plan (HMP).

139. The ES addresses risk relating to past mining activities. The risk is considered low to negligible because of the siting of turbines and infrastructure outside of high risk areas. Consideration has also been given to the potential construction and operational impact on the Albion tip stability and the proposed drainage design takes account of this issue. Without mitigation the development could result in greater water flow towards the Albion tip. An outline drainage strategy would address run-off and water flow infiltrating the tips and periodic monitoring of the site. The Council accepts the applicant's findings in respect of mining risk. Due to the proposed distance from the turbine and its infrastructure it is considered that there is unlikely to be any effect from the proposals on the tips in the area.

140. FW and PPW offer strong support the provision of renewable energy as does the LDP. There is a strong presumption in favour of such projects in national Policy to the point where adverse impacts have to be particularly severe for a refusal of planning permission to be justified.

141. The Highway Authority states that the Proposed Development would have limited impact on the highway network within the boundary of RCT CBC and therefore no objection is raised or condition suggested.

Noise – Caerphilly CBC and RCT CBC

142. The ES concludes that the appropriate noise standards in ETSU-R-97 can be met. The applicant’s approach to setting the upper daytime noise limit was raised by the Councils. Following discussions with the applicant and environmental health officers from both councils, it was agreed that a daytime noise limit can be set at the greater of 38 dB LA90 or plus 5 dB above background, with the exception of 4 noise limit locations in Caerphilly CBC where a daytime lower limiting value of 40 dB LA90 can be applied. In conclusion, an appropriate suite of planning conditions to address potential noise impacts has been agreed.

Statements of Common Ground.

143. Statements of Common Ground (SOCG) between the applicant and various parties have been submitted as follows:

144. Arqiva have agreed that potential interference with links can be addressed by mitigation and a condition has been suggested which protects RBL broadcast linkages through the implementation and monitoring of a remediation scheme. The applicant has agreed the wording of a draft condition with Cardiff Airport. The applicant and Wales and West Utilities Ltd have agreed set of guidelines and standards and an associated indicative design to allow the crossing of a high pressure gas main to be agreed at this time, before further information is prepared and approved by Wales and West Utilities Ltd following any approval. The applicant and Dwr Cymru Welsh Water have agreed protection zones for its assets on the site. The applicant has agreed to conditions stipulated by Dwr Cymru Welsh Water.

145. Cadw agree that the methodology used for the assessment and most of the assessment work and the identification of effects. The only difference of opinion relates to the cumulative effect of the proposal and the Cwm Ifor Solar farm. Cadw considers the effect to be major adverse, whilst the applicant considers it to be moderate adverse. Both are significant.

146. The SOCG with Welsh Government Transport Directorate (WGTD), responsible for the trunk road network, states that WGTD has reviewed the transport and access elements of the Proposed Development. The Transport Directorate represents Welsh Ministers on all trunk road matters and has been consulted on the draft application documents. The construction phase of the Proposed Development would result in a temporary increase in traffic levels. Following the commissioning of the site, the operational phase would not result in significant traffic flows on the trunk road network. The transport of Abnormal Indivisible Loads (AIL) has been considered in the application documents. The Welsh Government and the applicant have considered suitable planning conditions and have agreed the wording of several conditions pertaining to transport matters.

147. Another SOCG between the applicant and NRW confirms that there are no outstanding areas of disagreement on landscape impacts other than the impact of the proposal on the BBNP.

Consultation Replies

148. The following is a summary of the representations received, updated as appropriate in light of the consultation on the further information submitted by the applicant.

Natural Resources Wales (NRW)

149. NRW are satisfied that the LVIA has been carried out in accordance with the relevant guidance. They raise concerns that the proposals would result in significant adverse effects to key landscape receptors including Mynydd Llangynidr and Mynydd Llangattock Landscape Character Area (BRCKNVS372) and the visual receptor within BBNP (visitors to popular hill summits in the National Park). NRW agree with the LVIA that the applicable receptors in BBNP have the highest sensitivity to change. However, when combined with a low magnitude of change, the effect on these receptors would be **moderate adverse**, which is significant for EIA purposes. The ES LVIA may have attributed more weight to the magnitude of change than the sensitivity of the receptor - which is not appropriate in relation to the BBNP receptors. It is concluded that there would be a moderate adverse and significant impact and in this regard the conclusions of the ES have under estimated the impact on the national park.

150. At locations such as Viewpoints 30 and 32, all 14 turbines would be visible above the horizon as new skyline features and Turbines 1-3 would extend the impact across the horizon and appear as a separate and additional development. Viewpoint 32 is located within the iconic landscape context of the highest peaks in the National Park. It is

approximately 28 KM from the development. Although at some distance the development would be noticeable and visible above the horizon in a part of the view which is currently unaffected by comparable development. Walkers on the promoted routes to the iconic summits would be interested in an acutely aware of the surroundings. Due to the size of the turbines, the turbines would be seen prominently above the horizon and blade rotation would attract attention. Visual effects identified at these locations would be significant and in turn would erode sensory and perceptual qualities within the applicable LCAs and interfere with people's enjoyment of the landscape. Opportunities to moderate the effects on the BBNP should have been explored, which might include a reduction in the size of the turbines and the deletion of the separate group of turbines (T1-3) which lie outside of the PAA. As these opportunities have not been adopted NRW objects on these grounds.

151. At the Hearing NRW supported the Caerphilly CBC view on the more widespread impacts on landscape character than the applicant's assessment.

152. The removal of the northern borrow-pit from the proposals, which was situated on an area of deep peat and the intention to undertake further probing for peat and micro adjust the siting of the central sub-station, to minimise impacts on any areas of deep peat, are positive changes. The developer should ensure that any impacts on deep peat areas on the hill are minimised and where required, make use of floating platforms.

153. Given that they have made positive adjustments to conserving peat deposits on site, NRW are satisfied with their responses and accept their approach to mitigation for peat deposits along the northern access route. In addition, given the positive approach and commitment to undertake further peat probing across the northern access route, NRW no longer require further detailed site investigations for peat are undertaken prior to consent.

154. NRW highlight legislation and guidance related to protected species – bats, dormouse, water vole and Otter. In relation to bats NRW are satisfied with the analysis of the bat activity data and surveys undertaken. Species of concern are Pipistrelle bats and Noctule bats. The ES concludes that there would be a significant effect in the absence and mitigation measures. It is necessary that measures are implemented to mitigate the risk of collision with the proposed turbines. Conditions are suggested to address turbine siting, feathering, turbine curtailment and post-construction but monitoring.

155. In relation to otter, whilst the ES surveys found that optimal habitat is present within the site, there was limited evidence of the presence of otters within the site. It is recommended that pre-commencement checks are carried out and measures to ensure movement along water courses safely would also be required. This can be addressed in the CEMP and covered by condition.

156. There was limited evidence of the presence of water vole within the site and NRW are satisfied that appropriate preconstruction surveys can be controlled as part of the CEMP. The HMP would address improvements to habitat and require the developer to undertake monitoring. A requirement for a HMP can be addressed by a suitably worded condition requiring submission for approval by the LPA.

157. The ES found no evidence of the presence of dormice within the site. However, objectors had drawn attention to a survey in connection with a current application for development at the National Grid substation, to which the proposal would connect. This survey found evidence of dormice in the area. However in the light of evidence of dormice within the application boundary and the fact that the installation of the underground cable could cause loss or fragmentation of dormice habitat, NRW recommended a condition requiring a dormice conservation plan to cover the lifetime of the development. This would address the concerns raised.

158. Appropriate pollution prevention measures can be controlled by the CEMP and NRW suggest wording including a surface water management plan. The private water supply assessment within the ES identifies the existing private water supplies within the site boundary and 1 km buffer zone. Supplies identified as being at risk of water quality or deterioration are to be included in the sampling programme the sampling programme would be detailed in the proposed water quality monitoring plan. NRW are satisfied the mitigation measures proposed include contingency, alternative supplies and reinstatement or replacement of supply if required. This plan can be secured via condition. NRW was satisfied with the applicant's response regarding mitigation of potential effects of borrow pits on controlled waters and had no further comment.

159. NRW were content with the survey methods and scoping of the ornithology assessment. It is noted that surveys were undertaken in accordance with the recommended guidance. Schedule one birds were present on the site including nesting barn owl, goshawk, and hobby. Whilst a collision risk monitoring report has been submitted, current modelling methods may not always reflect the situation in Wales accurately. NRW request a suitably worded condition for post-construction monitoring be included on any permission granted. This would address remedial measures to reduce any impacts identified through the monitoring procedure. NRW had noted the concerns raised by RCT ecologist in relation to golden plover, which is a red listed bird of conservation concern species with evidence of a decline in Wales. After consideration of the evidence there is no objection in relation to the impact on golden plover.

Welsh Government Soil Policy & Agricultural Land Use Planning Unit (Soils Unit)

160. The Soils Unit initially objected on the grounds of loss of peat resource, that provisions for the conservation and protection of peat cannot be achieved, and the proposal lacks detail for the effective site restoration of mineral soils. The Soils Unit has met with the applicant and there has been constructive engagement resulting in the narrowing of the outstanding issues to the following:

- Access track to the North of the Site – discussions around the use of a floating track and proposed drainage ditches have taken place. However, the avoidance of peat impacts and irreplaceable habitats in infrastructure siting has not been demonstrated. The applicant has adopted step 2 minimise.
- The siting of Turbine 10 – the Avoidance of peat impacts and irreplaceable habitats in infrastructure siting has not been demonstrated in that the works to erect this turbine would be on peat.

161. These elements of the proposal would result in a net loss of the peat resource in conflict with Policies 17 and 18 of FW and Chapter 6 of PPW. In regard to these matters the project has not followed the stepwise approach and as such conflicts with Policy 9 of FW to that extent.

Cadw

162. The application is accompanied by an ES compiled by LUC with Chapter 11 Cultural Heritage prepared by Headland Archaeology. This chapter has considered the impact of the Proposed Development on the designated historic assets listed in Annex B, which confirms that there are scheduled monuments within the site and then lists all heritage assets within the zone of theoretical visibility.

163. It should be noted that GM637 Prehistoric Rock Art at Tai'r Waun Isaf has been designated as a scheduled monument since the environmental statement was prepared but is included in the assessments and has been treated in them as a nationally important

site. Thus, this recent designation does not alter the assessment of the impact of the Proposed Development on this historic asset.

164. The design of the windfarm has taken into account the presence of designated historic assets and the potential impact on them, in particular to the settings of scheduled monuments GM002 Caerphilly Castle, GM452 Cross Ridge Dyke & Earthwork on Cefn Eglwysilan and GM456 Cross Ridge Dyke & Cairn on Twyn Hywel as well as the nationally important Senghenydd Dyke.

165. The ES has concluded that there would be no direct impact on any designated historic assets but there would be negligible effect on the setting of the nationally important Senghenydd Dyke, a minor effect on the setting of the cairn, which is included in scheduled monument GM456 Cross Ridge Dyke & Cairn on Twyn Hywel and moderate effects on the settings of scheduled monument GM002 Caerphilly Castle and listed buildings listed buildings 13541 Llanbradach Fawr and 25539 Barn and Stable Range at Llanbradach Fawr.

166. These effects are not significant effects. However, when the cumulative impact of the proposed Twyn Hywel Energy Park and the proposed Cwm Ifor Solar Farm on the setting of scheduled monument GM002 Caerphilly Castle are considered together, the impact increases to Major and Significant. This Significant effect constitutes a demonstrably and unacceptably damaging effect on the setting of scheduled monument GM002 Caerphilly Castle, which is contrary to section 6.1.24 of Planning Policy Wales.

167. Whilst there are no mitigation measures are proposed, or possible, to reduce these significant effects, the applicant has sought to offset them by producing compensatory benefits which are outlined in sections 4.22 to 4.27 of document APP013, Collaborative Benefits Report and in more detail in Appendix 1 of that document. The decision-making authorities would therefore need to consider if these benefits added to the other benefits of the proposed energy park outweigh the adverse impacts on the setting of scheduled monument GM002 Caerphilly Castle.

Glamorgan Gwent Archaeological Trust (GGAT)

168. The assessment meets current professional standards and has gathered information relating to the historic environment from all relevant sources. It has also assessed the likely impact of the Proposed Development against that information. The report details the known historic assets within the Proposed Development area, and those external to the Proposed Development area but within the wider study area and therefore upon which the development may have a visual impact, on the assets or their setting.

169. There are both Scheduled and non-designated cairns in the study area, as well as round barrows and Iron Age enclosed settlements. A Roman road is located in the eastern part of the site, and there are cross ridge dykes in the western section of the development. Post-medieval farms and industrial extractive remains such as quarries and a coal level are also present. Accordingly a geophysical survey (Headland Archaeology, February 2022) has been conducted, targeting areas of potential impact including the turbine bases. However, no anomalies of likely archaeological interest were identified.

170. Nevertheless, there is the potential to encounter archaeologically significant remains during the course of the proposed works. As such a programme of archaeological work, both pre-commencement and during the construction phase is proposed. Such a programme includes the fencing of identified features and structures in order to prevent accidental damage and the investigation and recording of various structures. It is also

proposed to microsite the turbines, services and compounds to avoid known sites, thus preserving them in-situ. GGAT concurs with such an approach.

171. GGAT recommends that a condition requiring the applicant to submit and implement a detailed written scheme of investigation for a programme of archaeological work to protect the archaeological resource should be attached to any consent granted by the Ministers

Aviation Consultees

NATS for Cardiff Airport

172. The airport has confirmed that the suggested condition would satisfactorily mitigate the impact of the proposal on the airport's primary surveillance radar.

NATS for Bristol Airport

173. The Proposed Development has been determined as having the potential to cause occasional degradation of the radar, this has been deemed to be acceptable.

NATS En-Route Ltd

174. The Proposed Development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company has no safeguarding objection to the proposal.

Civil Aviation Authority (CAA)

175. Was consulted in relation to proposed obstacle lighting scheme. CAA approved the lighting design.

Defence Infrastructure Organisation (DIO) of the Ministry of Defence

176. Confirmed the lighting scheme detailed in the CAA letter dated 9th September 2022 would be considered acceptable to the MOD.

South Wales Fire and Rescue Authority

177. No objection to the Proposed Development. The developer should also consider the need for the provision of adequate water supplies on the site for firefighting purposes and access for emergency firefighting appliances.

The Coal Authority

178. On the basis of the conclusion reached in the ES, that the built development and associated works fall outside of the areas where our records indicate that coal mining features are present, the Planning team at the Coal Authority has no objections to this application.

179. *Health & Safety Executive* – no comments.

180. *JRC* on behalf of the UK fuel and power industry no objections in relation to radio link infrastructure operated by the local energy networks.

Political and Public Representations

181. The objections from local members, Aeolod Senedd and a local MP, from the general public and local residents raised concerns in relation to:

- Landscape and visual impact – immense scale of turbines – should be smaller and T1-3 removed. The visualisations and selected viewpoints are misleading.
- Noise & health impacts. Effect on living conditions. The proposed turbines are too close to homes. Impact on those with special needs. Potential for AM and infrasound

effects. The standards in the ETSU guidance should not be followed. It is recognised that it is out of date by the Minister.
- Construction noise and traffic impacts
- Possible effects on TV reception
- Pollution from blades and of water
- Impact on wildlife – Red Kite, raptors, Golden Plover. Turbines killing hundreds of bats each month (source: Guardian 2016)
- Loss of trees
- Effect on cultural heritage – the site is in an outstanding historic landscape.
- Risk of landslides and land instability, some workings are not on Coal Authority records. Very concerned about the risk of disturbance to coal tips in the area as a result of the proposal – works too close to the Albion tip, Cilfynydd.
- Risk of flooding – Cilfynydd, Rhydyfelin, Pontypridd
- Effect on horses – should give land for a bridleway
- Adverse impact on tourism sites – Caerphilly Castle
- Loss of property values
- Applicant is not a Welsh company and has no track record with wind energy development or money to restore the site or compensate people
- Safety – turbine fires, failures, etc.
- Conflict of Interest Welsh Pensions Partnership (Councils pension) funding the proposal. Welsh Government funding the Scheme
- Community benefits fund questioned
- Impact on Llanfabon 11thC Church, Mining memorial.
- The cumulative impact with a major development for a Synchronous Condenser adjacent to the National Grid Cilfynydd substation
- Discrimination developers targeting poorer less well-educated areas
- Dissemination of information – problems with Portal, complex information to analyse, equality of Arms.
- Climate emergency UK a very small contributor – rush for ineffective technology not justified.
- Contrary to Gunning Principles
- Landmap – Rare landscape & recommendation to avoid verticals
- Output figures wrong
- Object to post consent conditions requiring details/plans. There are too many pre-commencement conditions and Local Planning Authorities don't have resources to enforce
- Major concern is the seismic vibration effects of turbines on health, wildlife and ground stability

182. Several expressions of support for the proposal were also received.

Responses to Common Land Applications

Minister for Rural Affairs and North Wales, and Trefnydd, Welsh Government

183. It is noted that the applicant has consulted with the commoners and a cooperation agreement between the commoners' association and the applicant is agreed in principle which, according to the pre-application consultation report, addresses all the noted concerns of the commoners' association raised during the preapplication. The cooperation agreement would ensure the habitat management plan can be delivered. This is a positive step forward given the lack of an existing plan on the common.

184. The Minister notes the replacement land is larger in area than the release land resulting in a greater area for the public to enjoy their rights of recreation. The Minister supports the developer's proposal to reinstate rights of access over areas of the release land and to return the site to its former state post decommissioning.

185. In respect of the application under section 38 of the Commons Act 2006, The Minister notes the land affected for the underground cable is small and the related works would be of a short duration. More importantly, the land would be reinstated once works have finished. The Minister also believes upgrading the Byway Open to all Traffic would be beneficial to the wider public.

186. On the basis of the information currently available, the Minister would currently be minded to assess the application for the deregistration and exchange of common land as not detrimentally affecting the majority of the criteria under section 16(1) the 2006 Act at this stage. In respect of the application under section 38 of the 2006 Act, the Minister does not believe this would have a negative impact on the criteria under section 39(1) and 39(2) of the 2006 Act.

Appraisal – the DNS Application

187. The main considerations are:

- the effect on the landscape character and visual amenity of the area;
- the effect on the ecology of the area;
- the effect on historic assets and their settings; and
- whether any harm identified in relation to the foregoing considerations is outweighed by the benefits of the scheme, particularly its contribution to renewable energy generation and combating the effects of climate change.

Landscape and Visual Impact

188. The LVIA was produced in line with industry standard guidance set out in the 3rd edition of the Guidelines for Landscape and Visual Impact Assessment which is published by the Landscape Institute. The LVIA is based on a study area of 28 Km radius from the site. A Zone of Theoretical Visibility (ZTV) based upon the topography across the local landscape, defines the area within which to assess the potential significant landscape and visual effects. As part of this process representative viewpoints (VPs) were chosen in consultation with the LPAs, NRW and Cadw. In response to concerns raised by local councillors photomontages from additional VPs in Pontypridd were submitted by the applicant as part of the further information (Regulation 15 (2) Response). I visited selected viewpoints to assess the effects of the proposal for myself.

189. The LVIA has assessed the construction, operation and decommissioning phases of the development. I accept that the construction and decommissioning phases would, at certain times, have a greater impact than during its operation. However, as construction and decommissioning are likely to be relatively short-lived processes, I shall focus mainly on the operational period of the project.

190. I do not share the concerns that the visual representations provided in the photomontages are inaccurate and misleading. They have been prepared in line with current best practice and suggestions made at the scoping stage. In any event they are merely a tool to be used by decision makers in assessing the impact that a proposal might have. I have visited viewpoints (using a programme suggested by the parties) to assess the likely impact of the proposal.

191. Landscape and visual effects are assessed separately. Landscape effects are those of change and development in the landscape, and on the elements that make up the landscape and its distinctive character.

192. The site occupies an upland horseshoe-shaped area and features hills that are situated along the ridges of Mynydd Eglwysilan and Cefn Eglwysilan, and steep valley sides where the land falls into the surrounding valleys. In the west, the Site rises to its highest point, 382m AOD (Above Ordnance Datum), at the trig point of Cefn Eglwysilan and in the east it reaches 350m AOD at Mynydd Eglwysilan. The ridge is drained by several narrow valleys, which merge with the Nant yr Aber in the south. The site comprises open moorland, grassland and grazing fields with some mire and bog. There are existing man-made vertical features of overhead lines and pylons, telecommunication masts and a single turbine.

Landscape Character Impacts

193. The site is within NRW's National Landscape Character Area 37 South Wales Valleys, which is described as deep urbanised valleys which dissect upland areas. The site shares many of the characteristics of upland areas cited in the National Landscape Character Area. Both LPAs rely on the LANDMAP national dataset of aspect layers and areas. The LANDMAP landscape units for the assessment are based on the visual and sensory aspect layer with information from the other aspect layers have fed into the descriptions and evaluations. The views of NRW informed the filtering process. Detailed assessments have been undertaken for the landscape units within 10 km of the nearest proposed turbine (as these are the most likely to experience potentially significant effects). A higher-level assessment has been applied to the landscape units beyond 10km. All the locally designated SLAs within 7 km were taken forward for assessment.

194. The assessment predicts direct landscape effects leading to a major impact for the LANDMAP landscape units directly affected by the Scheme (Mynydd Eglwysilan & Mynydd Meio (CYNONVS317); and Llanfabon (CYNONVS143)) up to around 1.5 km from the turbines and moderate indirect impacts for 12 other landscape units from 1.5 km up to around 7 km from the development. In terms of SLAs the host Mynydd Eglwysilan and Taff Vale Eastern Slopes SLAs there would be a significant effect on the landscape character of part of the SLA including direct loss of some landcover and the addition of turbines to the panoramic views from Mynydd Meio and Cefn Eglwysilan. However, the other primary landscape qualities and features would remain. The assessment concludes that there would be an effect on views from 2 other SLAs but not on the other primary landscape qualities and features of the areas. For all other SLAs within 10km, the Proposed Development would not affect their primary landscape qualities and features, partly because views are not mentioned as a primary landscape quality/feature for many of the SLAs, and due to the intervening distance between the Proposed Development and SLAs.

195. For the other landscape units not directly affected the ES predicts that the overall level of effect on landscape character would be moderate from the parts of the unit where the proposal would be seen. Beyond 7 km the ES assesses that there would only be a small change to landscape character, because although the turbines would be seen this would be in the context of a wider landscape and the fundamental characteristics of the landscape there are more likely to remain unchanged.

196. Both NRW and Caerphilly CBC disagree with these conclusions and consider that the effects would be more widespread. They argued at the hearing that the Council's Landscape Study (see above) was of relevance in concluding that this should be

considered to be a medium scale landscape. I do not agree. This guidance has been superseded by Policies 17 and 18 in FW.

197. Whilst I note Caerphilly CBC comments in relation to the scale of the landscape, this is based on supplementary planning guidance (the Landscape Study) that has been superseded by Policy 17 in FW. I agree with the Council that large-scale effects may extend for further than 1.5 km from the turbines, but not that this would affect an area up to 7 km away. The three turbines outside the PAA are close to the boundary and I do not consider that the landscape impacts of these three turbines would of themselves be so significant as to warrant refusal of planning permission.

198. I am mindful that PPW identifies a requirement to ensure statutory landscape designations are protected but also that opportunities for renewable energy are taken into account. It focuses upon landscape character and does not reference visual amenity.

199. However, FW forms part of the development plan for the area and provides more up to date policy advice, specifically for DNS applications. The site is within PAA 10 as identified in FW. In these areas the likely impact of wind turbines of this scale on the landscape has already been modelled. Policy 17 concludes that the area is capable of accommodating development in terms of landscape character. That same Policy also goes on to state that there should be a presumption in favour of large-scale wind energy development in these areas, subject to the criteria set out in Policy 18. For the avoidance of doubt, Policy 18 expressly omits any test in respect of landscape impacts for wind energy proposals located within the PAAs.

200. NRW disagrees with the Applicant's LVIA results in respect of the impacts of the proposal on BBNP. Notwithstanding the presumption in favour of large-scale wind energy development in PAAs established by FW, NRW considers the development's effects on the natural beauty and special qualities of BBNP within the context of PPW. NRW are concerned that the proposal and especially the 3 turbines outside the PAA would have significant adverse effects on key landscape receptors and from important views and iconic locations within BBNP, as represented by VPs 30 and 32.

201. In terms of the impact of the proposal on BBNP, I note that the methodology used for defining the boundaries of the pre-assessed areas in FW specifically considered the landscape impacts of wind turbines up to 250 m in height. Policy in FW has therefore concluded that landscape impacts of proposals within these areas would be acceptable in principle. The ES has examined likely effects on landscape character of the landscape units within the National Park and concluded that there would be no significant effects on the character of BBNP. It has also assessed the effects on the special qualities of BBNP as defined in the BBNP Management Plan. I consider that the Proposed Development would add to man-made features visible from the park rather than detracting from the features and special qualities that define the park itself.

202. The proposal would be visible in views south from the BBNP and these views extend beyond the boundary into a landscape that already includes wind turbines and other man-made features. I have visited viewpoints 30 and 32 which are identified as the critical viewpoints by NRW. The closest turbine would be around 20.7km from VP30 and 27.9km from VP32. At these distances the proposal would be seen in one direction only as a relatively small feature of a wider panoramic view. There are other existing developments closer to the viewer, such as existing wind farms and other developments that occupy the field of view. The proposal would only be seen in favourable weather and atmospheric conditions. I consider that the proposal would be a relatively small element in these views.

203. I note the rationale for the size and layout of the proposal as explained by the applicant. NRW were particularly concerned about turbines Nos. 1 to 3, which are outside the PAA. I do not agree that their additional impact on the landscape character of the Park would be so significant given the distance of the views and the other factors identified above.

204. In fact the proposal would be further away from the Park than many parts of PAA 10. Welsh Government has assessed that turbines in these locations would not have an unacceptable landscape impact on BBNP. These points are also relevant to the impact on landscape character from other views to the north as identified in the submissions of Caerphilly CBC, such as from VP22.

205. Having weighed the evidence and visited the site and VPs, I consider that the impact on the BBNP and its special qualities would be minor and not significant.

Visual Impact

206. There would be significant visual effects during both the construction and operational stages from some of the local communities within 5km of the proposed turbines. Major effects are predicted on views from the edge of Cilfynydd (Heol Mynydd and the eastern ends of Cynon View and Hilltop Avenue), the terraces situated on the elevated slopes of the Aber valley and located at the northern end of Senghenydd, and the northern end of the Fford Las cul-de-sac in the north of Abertridwr. There would also be lesser (although still significant) effects on some of the elevated streets in Cilfynydd, Abertridwr, Hengoed, Gelligaer, Maesycwmmer, Nelson, Caerphilly, Glyncoch, Abercynon, Treharris and Blackwood. The ES explains the basis for finding moderate effects on parts of Caerphilly, Oakdale and Blackwood is related to the distance from the proposed turbines.

207. I consider that the most significant visual effects are on parts of the communities of Senghenydd and Abertridwr., which the parties agree is the area that would experience the most severe impact. The effects on other areas, whilst significant, would be of a lesser scale. The ES identifies four property groups comprising residential terraces situated on an elevated slopes of the northern end of Senghenydd and two groups in the north of Abertridwr. Having visited these locations I agree that the visual impact of the proposal would be large on these groups of dwellings. There are locations where the turbines would be seen into directions giving an impression of being somewhat surrounded by the development. However, it would not be so great as to constitute a matter of public interest. It is also relevant that these represent stationary views relevant to the residents of those areas only. The relevant landscape Institute guidance provides that this occurs when the impact on private views is so great that it becomes a matter of public interest. Nevertheless, given that these are groups of dwellings I find that these visual impacts are significant. I accept the applicants' point as set out in evidence that when moving around and through the settlements views of the turbines would be intermittent. As one travels along the main route through the settlements for example, views are screened by buildings and vegetation.

208. The landscape architect for Caerphilly CBC clarified the concerns in relation to the scale of visual effect on communities in a response to the applicant's further information (Regulation 15 (2) response). This related to the impact viewed from viewpoints 3 and 5 in Senghenydd and viewpoint 6 in Abertridwr, which are located in the upper residential streets of these settlements. The concern relates to the turbine arrangement and proximity being overbearing and out of scale up the settlement pattern including steep valley slopes. The council do recognise that when one is moving through the settlements views would be intermittent and partially obscured. However the turbines would be high dynamic moving large-scale new element in the available views. The conclusion is that

refusal would have been recommended unless the 3 turbines outside pre-assessed area were omitted.

209. Considering the impact on the identified views in Senghenydd and Abertridwr in the light of all the evidence received and my observations during my site visits, I reach the following conclusions. The impact of turbines 1 to 3 would be less pronounced than views of the larger cluster. Even within the settlement property groups identified in the assessment there is variation in the extent of the impacts in terms of the visibility of the turbines.

210. I do acknowledge that there would be a significant impact. However the majority of the turbines are within an area that has been pre-assessed as suitable for large-scale wind turbines. In such areas it is to be expected that there would be a considerable degree of visual impact given the proximity of the pre-assessed area to settlements. It must also be recognised that there is a degree of relatively substantial man-made infrastructure already existing in the area in the form of pylons, overhead lines, a wind turbine and telecommunications masts.

211. Overall I conclude that there would be adverse visual impacts which would be most severe in parts of Senghenydd. I conclude that these significant impacts must weigh against the proposal. As against this these effects would not be unexpected for a development of this scale in the type of landscape associated with PAA 10. This is a well settled part of Wales and therefore it is unavoidable that visual receptors would see wind energy development in this PAA. The acceptability of this is a matter of planning judgement and balance.

212. The ES includes a RVAA prepared in accordance with relevant guidance published by the Landscape Institute and informed by past experience and appeal decisions for wind farms throughout the UK. The relevant test is whether the properties would become an unpleasant place to live because the turbines would be so overwhelming, unpleasantly encroaching or inescapably dominant from any property, or render the property and unpleasant place to live.

213. 47 properties or property groups within 2 km of the proposed turbines were assessed 14 of these would experience a high magnitude of change to views and a further 21 would experience what is described as a medium magnitude of change. It is concluded that none of these properties would become an unpleasant place to live and so the impact of the proposal passes the above test. I note that the closest properties are within surrounding valleys and are located on upper slopes. The main views from those properties are often directed away from the proposal and down the valley sides. Some views of the proposal are also screened by outbuildings and trees in several instances.

214. I have also assessed the impact from the upper parts of Cilfynydd, settlement property group S1 in the RVAA. There would be views from the rear of these properties of turbines 1, 2 and 3 at close proximity. However, the primary view from the dwellings close is in the opposite direction across the Taff Valley. The view from dwellings across the road would be screened by the closer dwellings. There are also existing telecommunications masts and other infrastructure in some of these views. For these reasons, I therefore conclude that the impact of the proposal on residential amenity would not be so severe.

215. The ES predicts major effects for users of open access land, PROW and promoted walking routes within the site. There would also be large scale visual impacts for receptors who are outside the site but within 2.5 km who have open views of the turbines, where there is a direct line of vision and the turbines would be a substantial part of the view. The ES also assesses that there would be a major visual impact from panoramic viewpoints in Parc Penallta Country Park and significant effects for visitors to Llancaiach

Fawr Manor grounds and visitors to the towers in Caerphilly Castle. However for walkers these would be relatively short-term views and for all receptors these would be mostly views in one direction, on some occasions.

216. The impact of the aviation lights on the turbines has been assessed. A significant visual effect would occur to views from Caerphilly common when the lights are turned to their brightest mode. However mitigation would be provided. The lighting design would minimise the number of lights on turbines whilst maintaining aviation safety. In addition, weather data shows that the lighting would be set at the higher intensity for only 12% of the time when visibility is low. For the remainder of the time they would be set at a lower intensity.

217. The cumulative effect of the proposal with existing, consented and planned wind farms have been assessed by means of three scenarios. The applicant has also now included two recent proposals for DNS developments that had missed the cut off point for the ES assessment. The cumulative assessment concludes that there would be no additional cumulative effects over and above those set out in the LVIA for the three scenarios considered. I have no reason to dispute that conclusion.

Conclusions on effect on character and appearance

218. Based on the foregoing, I accept that there would be an adverse and significant effect on landscape character around the site, and a limited impact from certain viewpoints within the National Park. There would be significant impact on visual amenity from sensitive receptors, especially those properties and settlements closest to the site. There would therefore be some conflict with the aims of Policies SP10, CW2 and CW4 of the Caerphilly CBC LDP and Policies AW5 and AW10 of the Rhondda Cynon Taf LDP. However, this must also be considered in the context of FW Policies 17 and 18, which clearly support wind farm development in PAAs and on adjoining land. As FW is the most recent expression of development Plan Policy and is the strategic plan, I must conclude that the proposal would be consistent with the thrust of the Development Plan overall to support wind energy development, whilst recognising the adverse impacts locally on landscape character and visual amenity.

Ecology

219. The relevant planning Policy has been set out above including Policy 9 of FW and Chapter 6 of PPW (which both reflect the duty under Section 6 of the Environment (Wales) Act 2016). I also noted the step-wise approach, which adopts a hierarchy which is to avoid, then minimise, mitigate/restore, compensate on site, compensate off-site and finally to refuse permission. Step 1 (b) could apply to peatland by virtue of footnote 129 to paragraph 6.4.15 of PPW.

Effect on Peat

220. Chapter 7 of the ES provides a detailed assessment of the potential effects of the development on peat and soil resources. The applicant has undertaken extensive site investigations including over 1,000 peat probes. The results of the investigations were provided in the ES with further detail in the response to the Soils Unit representation. The information demonstrates that the site contains localised small scale areas of peat (using a conservative definition of peat depths greater than 0.3m). Discussions have taken place between the applicant and the Soils Unit leading to an agreed position. The proposal largely avoids areas of peat and impacts on soils subject to securing the Peat Management Plan (PMP), HMP and CEMP by conditions. There are two outstanding

areas where peat would be affected by the development – the hardstanding associated with Turbine 10 (T10) and part of the northern access track.

221. The applicant has indicated that as far as possible the northern access track would be sited to avoid areas of peat and that a floating track would be used. There is support for the use of floating roads to reduce the impacts on peat in good practice guidance issued by Scottish Natural Heritage.

222. The location of T10 was selected prior to the revisions to PPW last year. The applicant has explained that a range of technical and environmental constraints as set out in paragraph 3.15 of Chapter 3 of the ES, meant that the hardstanding associated with T10 must be located in an area where the average peat depth is 0.5m. The evidence is that this is not an area of active bog habitat, rather it comprises acid and marshy grassland. Micrositing would also afford opportunities to minimise the area of peat affected.

223. Considering step 3 of the step-wise approach, the use of floated tracks would minimise the impacts on peat. The PMP addresses how all excavated peat can be effectively and appropriately re-used on site and provides good practice methods for handling and restoration of the minimal peat anticipated to require excavation. A fully detailed plan (which would require information from preconstruction intrusive site investigations, detailed engineering design, and involvement of construction contractors) would be provided to and agreed with the LPAs prior to commencement of construction.

224. The consultees have divided views on the impact on peat. NRW has no concerns with the proposal in relation to the impact on peat. The Welsh Government Soils Unit declined to attend the hearing to which they were invited. However, it has confirmed that they agree with the applicant's identification of the remaining concern being confined to the two small areas identified above – T10 hardstanding and the northern access track. It maintains its objections in relation to these two locations but otherwise has no objections to the proposal.

225. I consider that this evidential context demonstrates that there would be a very minor localised adverse impact on peat which leads me to conclude that Step 1 (b) does not apply. In relation to the step-wise approach in PPW, I am satisfied that steps 1, 2 and 3 have been complied with as far as possible for this proposal. The PMP also identifies proposed mitigation during construction to include details of storage arrangements, handling, reinstatement and monitoring. There would be a negligible remaining effect that would be compensated for in the habitat enhancement proposals within the HMP. The ES also contains a peat slide risk assessment, which has identified a low to negligible risk across the development area.

226. The concerns of the Soils Unit in relation to micrositing of the construction compound and its involvement in further discussions on the access track could be addressed by planning conditions. It is noted that there were no other outstanding issues.

Effect on Protected Sites

227. I have set out the approach to HRA above and the reasons for my conclusion that there would be no likely significant effect on National Protected Sites (formerly European sites). There is no requirement for an Appropriate Assessment.

228. There are no SSSIs within the site. The majority of SSSIs within the study area are designated for their habitats and plant species interest only and consequently would not be affected by the Proposed Development.

229. Ruperra Castle and Woodlands SSSI is over 8 km from the site and is notified for its greater horseshoe bat nursery roost. Whilst greater horseshoe bats were picked up by

the bat surveys for the ES, they are a species at low risk of collision with wind turbines and are unlikely to be affected by the proposals.

230. In terms of local designations, the ES considers the effects on the Mynydd Eglwysilan SINC (located in RCT and Caerphilly). The development is within the SINC and there would be direct effects in terms of the loss of 67.55ha and a further 16.68ha of habitat lost outside the SINC. It would not be appropriate to avoid the area because it is within a PAA in FW where this type of development is favoured. I consider that the amount of habitat loss has been minimised as far as possible.

231. It is acknowledged by the applicant and consultees that the SINC habitats are in poor condition due to past grazing and agricultural activity. An agreement has been reached with users of the common to facilitate its proper management to enhance the SINC habitats and improve habitat condition through management of grazing, scrub control and cessation of potentially harmful activities. The focus of this would be on ffridd habitats to enhance a minimum of 390.82 Ha within the SINC. An additional net benefit for biodiversity would be incorporated by enhancement of 36.36 Ha of off-common Rhos pasture and to enhance habitat for marsh fritillary butterfly.

232. So in terms of Step 3 of the step-wise approach, there will be on site mitigation and enhancement as follows. As well as the embedded mitigation outlined in paragraph 8.94 of the ES, the enhancement of 390.82 ha of SINC and ffridd habitat is proposed as part of the HMP (details are set out in paragraph 3.1.30 of the Regulation 15 (2) Response). There would be direct enhancement of 135 ha of SINC habitat. I and others had concerns over how these enhancements could be achieved given that the area is common land and subject to grazing and other rights. The applicant has reached an agreement with the commoners on delivery of the HMP. Their representatives withdrew all objections to the Proposed Development and the secondary consent applications prior to the hearings. The LPAs and NRW have raised no issue with the effect on the SINC.

233. I conclude that the step-wise approach has been followed in respect of Mynydd Eglwysilan SINC.

Effect on Protected Species

234. The ES has considered the effects, of construction and operation on protected species. The effects on badger, water vole, otter, reptiles and dormice were scoped out on the basis of field surveys and existing evidence. I am content with the analysis in the ES and supporting information with the exception of dormice, which I shall consider below. NRW were content with this evidence and recommended pre-construction checks for protected species and habitat enhancements/monitoring. These matters would be addressed by suitable conditions. I shall also consider the effects on birds separately.

235. Field surveys in accordance with good practice guidance were undertaken between 2020 and 2022 for bats. Details of the surveys are set out in Chapter 8 of the ES. The risk of collision was then analysed using the approved eco-bat method endorsed by NRW. Of the species present on this site during surveys the species of concern are Pipistrelle and Noctule. The ES concludes that there would be a significant effect on the species in the absence of mitigation measures. I am satisfied that the mitigation measures proposed in the ES and commented on by NRW would address these issues. The implementation of the mitigation measures can be controlled by the imposition of suitable conditions. I therefore conclude that there would not be a significant adverse effect on bat species following mitigation.

236. The ES had screened out the effect on dormice because none were found during the field surveys conducted in connection with this proposal. However I was made aware of a planning application by National Grid for a synchronised condenser at its nearby large substation. The Proposed Development would connect to the substation and a route corridor for that connection has been included in the application site. Surveys conducted in connection with this substation development indicates the presence of dormice in the area to the north of the site. I consulted the applicant and NRW on this issue and it was agreed that the matter could be addressed by condition. The condition would require a dormice conservation plan. I see no reason to dispute this conclusion.

Birds

237. The assessment considered Lisvane reservoir SSSI which is 8 kilometres from the site. As the duck species for which it was designated are not present on the site effects were scoped out.

238. The bird species which were scoped in for assessment where: barn owl, goshawk, hobby, peregrine, red kite, golden plover, nightjar and gulls, as well as 20 passerine species of birds of conservation concern. The predicted effects of construction on most species would be negligible with minor effects on Hobby, Nightjar and Golden Plover. These short term effects are not significant at this level of effect.

239. The operational effects comprise two elements – displacement and risk of collision. Displacement effects were found to be negligible for all species. Collision Risk Modelling (CRM) were completed using best practice guidelines and research on biometrics and avoidance rates. Risk of collision for most species was negligible The collision risk for Goshawk, Peregrine and Hobby is very low given the evidence of collision rates in the UK and the low number of flights picked up in surveys. A large study found that Red Kite are more at risk in Europe whereas there were 5 reported collisions in the UK. Overall rates are low, and the risk was found to be around 1 bird very 4.75 years. This is 0.01% of the Welsh population. The effect is predicted to be minor and not significant given the increasing population of the species across Wales.

240. The ES concluded that the risk of collision for golden plover would represent a minor and not significant effect. It was explained that the CRM process does not take the flocking behaviour of the species into account appropriately. CRM tends to overestimate the risk of collision because the software is not designed to address this behaviour. The difference in outputs for this site compared to another nearby DNS development at Mynydd y Glyn in RCT is explained in terms of differences in the total number of flights recorded in the surveys and the significant difference in the scale of the respective sites.

241. The survey work identified two roost locations in grassland areas within the site. A study on the impacts of wind farms in upland areas found that golden plover are displaced from operating wind farms to a distance of around 200m. There are significant open areas within the site that would be suitable for golden plover to roost at locations well over 500 m from the nearest turbine. The applicant has also provided information of 14 similar potential roost locations within 10 km of the site. Evidence presented with the other DNS application considered that there were nine locations of similar habitat and character with the potential to support golden plover within 10 km of that development.

242. The ecologist for RCT had raised concerns in terms of the cumulative effect of these two proposals on habitat suitable for golden plover. Following the receipt of further information and the comments of NRW, he has confirmed that there were no further objections on this issue.

243. Taking into account the evidence on the risk of collision and cumulative effects I conclude that the collision risk has been accurately assessed. This view is supported by NRW who have also requested a monitoring condition to be attached to any permission. The evidence of alternative land available for golden plover in the area were both schemes to go ahead satisfied NRW and the RCT ecologist. I therefore conclude overall that the effect on golden plover would not be significant.

244. The applicant proposes habitat enhancement as described above. This would provide benefits for birds in terms of improved habitat for ground nesting species and an increase in invertebrates and small animals which could lead to improved foraging for a number of species including red kite, nightjar and hobby. An increase in small songbird species would also potentially provide prey for goshawk and peregrine. The proposed hedgerow planting would yield significant benefits in terms of nesting opportunities and a food source for birds.

245. It is also proposed to clear non-native plantation forestry to create habitat suitable for breeding nightjar. This would take place in three locations separated from each other in order to encourage more than one breeding territory for nightjar. An added benefit is that these newly created open areas may provide improved foraging for local barn owl population. Post construction monitoring is also proposed to assess the efficiency of these measures in terms of breeding nightjar and would consist of nightjar and habitat surveys for a number of years after construction.

Trees

246. The likely impacts of the Proposed Development have been considered in accordance with guidance provided within British Standards. This includes the provision of a tree survey, Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS).

247. The AIA has identified a potential adverse impact to two high-quality trees and one moderate-quality tree. Adverse impacts to these trees would be avoided by micro siting the proposed access track outside of their root protection areas during detailed design. This would ensure that trees, which make a significant contribution to the area, are therefore retained.

248. Several trees would be lost as a result of the development as identified in the applicant's evidence. These losses would be compensated for through a programme of replacement tree planting using native species at a minimum ratio of three new trees for every tree which is removed. The long-term management of these trees would be secured through their inclusion in the final Habitat Management Plan

249. I am satisfied that the submitted Arboricultural Method Statement (AMS) provides sufficient information about measures to ensure retained trees are adequately protected during construction. The evidence is that horizontal direct drilling can be utilised to go under the root systems of a band of ancient woodland on the grid connection route. This would avoid impacts on these important trees and habitat. The concerns of the Arboriculturalist for Caerphilly CBC have been addressed and her input would be taken into account in the submission of a final AMS for the approval of the Local Planning Authority. This can be secured by conditions.

Net Benefit for Biodiversity

250. A net benefit for biodiversity would be secured through the Habitat Management Plan (HMP) and would comprise the following main elements:

- Enhancement of retained habitat to improve habitat condition through management of grazing, scrub control and cessation of potentially harmful activities. Focus of this would be on ffridd habitats to enhance a minimum of 390.82 Ha within the SINC.
- Additional net benefit for biodiversity would be incorporated by enhancement of 36.36 Ha off-common Rhos pasture and habitat enhancement for marsh fritillary butterfly, by controlling grazing, plug planting of devils bit scabious, scrub control and cessation of potentially harmful activities.
- Creating and enhancing hedgerow habitats along which bats would commute and/or forage, through new hedgerow planting, replacement planting (gap filling), hedgerow laying and rotational trimming. Replacement of any trees felled at a 3:1 ratio as required by PPW.
- A continuous supply of open canopy young woodland (<8 years old) for the benefit of nightjar, through provision of three woodland management blocks with rotation of felling, cultivation and re-stocking.

The HMP would ensure compliance with the DECCA framework through the above habitat interventions and the following outcomes:

- Diversity within ecosystems would be maintained and enhanced through provision of ffridd habitat enhancement and Rhos pasture creation, which would in turn would increase structural and botanical diversity over time and benefit a wider variety of organisms;
- Extent of existing ecosystems would be maintained through sensitive long-term management and increased where additional areas of habitat beyond the SINC would be created (including Rhos pasture and open canopy woodland);
- Condition of habitats would be enhanced through sensitive management, bringing the SINC habitats from their current poor conditions to good condition;
- Connections between ecosystems would be maintained and enhanced through enhancement and creation of hedgerows and management of the SINC ffridd habitats;
- Adaptability of ecosystems would be ensured through planting of suitable species, monitoring of habitats over the long-term and altering management regimes as required as conditions change.

Conclusion on Ecology

251. I conclude that the proposal (including mitigation) would avoid any unacceptable adverse impacts on protected sites and species, trees, habitats and biodiversity in general. A net benefit for biodiversity would be secured through the implementation of the Habitat Management Plan. I am satisfied that the applicant has control over the necessary land to secure these outcomes. The development would therefore be in accord with PPW and FW policies 9 and 18. I conclude that it would also comply with Policies SP10 and CW4 of the Caerphilly CBC LDP and Policy AW8 of the Rhondda Cynon Taf LDP.

Cultural Heritage

252. The ES Cultural Heritage chapter was accompanied by a Desk-based study informed by the data sources listed in paragraph 11.28, which included the records of Cadw, Glamorgan-Gwent Archaeological Trust (GGAT), the Royal Commission on the Ancient and Historical Monuments of Wales, the National Monuments Record as well as historic maps, aerial photographs, etc. The desk-based study also included a Settings Appraisal,

which identified the heritage assets to be taken forward for more detailed appraisal in the ES. The reasons for these decisions are set out in the appraisal.

253. The ES has appraised the impact of the proposal on heritage assets and their settings including the buried archaeological remains. The focus was on assets where there was the potential for a significant effect. Field surveys to define baseline conditions were undertaken and visualisations were prepared and included in the ES. I am satisfied that the appraisal was carried out in accordance with the published guidance of Cadw using methodologies agreed with Cadw and GGAT.

254. There were 8 Scheduled Monuments (now 9 as a cup-marked stone ref. GM637 has now been scheduled) and 2 monuments of national importance within the site. Other assets of lower importance have been identified and geophysical surveys around the turbine locations were undertaken.

255. The ES has assessed the impact of the proposal on 8 Scheduled Monuments (including GM637 and Senghenydd Dyke) and 8 listed buildings. Two of which are within the site – Llanbradach Fawr itself and an associated listed barn and range. 27 non-designated heritage assets were also assessed. Senghenydd Dyke is the remains of the enclosure of a 13th century deer park associated with the rulers of Caerphilly Castle. It extended more than 12km around the settlements of Senghenydd and Abertridwr enclosing an area of approximately 1,000 Ha.

256. The design of the scheme was influenced by the need to avoid impacts on heritage assets. The layout and number of turbines was changed to reduce impacts on Caerphilly Castle, which is a Grade I listed building and a scheduled monument. The layout was influenced by the need to avoid the upstanding sections of Senghenydd Dyke and the Cross Ridge Dykes. Micrositing would be used to avoid any uncovered remains (where possible).

257. Construction effects would be mitigated by protection from damage for important remains and archaeological investigation and recording if unavoidable impacts are necessary to assets of minor significance.

258. Scheduled monuments are of national importance and given a high level of protection, as indicated in paragraph 6.1.24 of PPW. In addition to being a scheduled monument, Caerphilly Castle is a Grade I listed building. Llanbradach Fawr and an associated listed barn and range are also listed buildings. Therefore, I have also had special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which they possess (s66(1) Planning (Listed Buildings and Conservation Areas) Act 1990).

259. Caerphilly Castle's heritage significance is derived from its evidential, historical and aesthetic value. The castle is of very high importance as the first concentric fortification constructed in Britain (between 1268 and 1271). The significance of its setting is determined by relatively short range views of the fortifications. Views from the Castle include those of the hills to the north and the associated Senghenydd Dyke. The ES concludes that the setting of the Castle would be changed by the proposed turbines, but this would have little impact on the significance of the Castle and would detract slightly from its appreciation. The low adverse effect on an asset of very high importance equates to an effect of moderate significance.

260. There would be no operational effects on the prehistoric ritual landscape in the north of the site, GM637 cup-marked stone, and dykes and cairns in the west of the site. The screening effects and limited views of the proposal from Llancaiach Fawr means that the

effect would be of negligible significance. The listed buildings at Llanbradach Fawr would experience adverse effects to their settings due to the proximity of the turbines, albeit partially screened. The ES concludes that there would be a moderate adverse significance of effect. There would be minor (in one case) or no effects on the other listed buildings. The effect on the setting of Senghenydd Dyke would be negligible. The most important part is views from the south of this extensive asset towards Caerphilly Castle where the intervisibility and historic relationship contribute to the significance of the asset. In the areas where views of the Castle are possible the turbines would be behind the viewer and so the visual relationship would not be affected.

261. A SOCG between the applicant and Cadw has been submitted. The ES methodology and assessment of the level of effect on heritage assets has been agreed. Cadw and GGAT agree with the assessments in the ES of the impacts of the proposal in isolation and agree that the programme of mitigation is appropriate.

262. The ES also considers cumulative effects on heritage assets. The conclusion reached is that the cumulative impacts would not be significant for any asset. Cadw does not agree with this conclusion in respect of the cumulative impact of the proposal and Cwm Ifor Solar Farm (a DNS development) on the setting of Caerphilly Castle. The applicant considers the effect to remain moderate adverse. Cadw considers the effect to be major adverse, which would have a demonstrably damaging effect on the setting, contrary to paragraph 6.1.24 of PPW. I note that the assessment of the cumulative effect for the Cwm Ifor proposal was also that there would be a moderate effect.

263. I visited Caerphilly Castle and agree with the parties and Cadw that there would be a moderate adverse impact on its setting as a result of the proposal. Whilst the upland setting to the north is important, it must be recognised that the Castle would be viewed and experienced in the round. Views in one direction would be affected but other views would not and the substantial Castle itself would screen some views to the north. Having considered the evidence and viewed the locations of the proposals from the Castle, I do not agree that the cumulative impact of the proposal and Cwm Ifor Solar Farm on Caerphilly Castle would be greater than the individual impact. The solar farm would be a low level development with no moving parts. In my view, the combined effect on the setting of the Castle would be largely similar to that of the proposal on its own.

264. I conclude that the proposal would have moderate (significant) adverse effects on the setting of Caerphilly Castle and Llanbradach Fawr and its associated listed barn and range. The impacts would be reversible after the 45-year lifespan of the proposal. Nonetheless these impacts must weigh against the proposal in the planning balance. The proposed heritage interpretation information would not provide mitigation but would be a benefit that would enhance the heritage value of the site. This is to be addressed in a Historic Environment Plan to be required by condition.

265. As noted above the Welsh National and Universal Mining Disaster Memorial Garden, Senghenydd has recently been added to the statutory Register of Historic Parks and Gardens in Wales by Cadw and announced as the National Mining Memorial. The applicant has assessed the impact of the proposal on the setting of this heritage asset (Headland Archaeology Note dated 7 March 2024). The heritage significance of the memorial garden is set out. It is 42m by 54m and was unveiled in October 2013. The assessment of effects concludes that the garden is primarily inward looking and the designed link to the surrounding landscape has not been completed. Three turbines would be visible in views to the west and the hubs of four and blades of another in views to the north east. The impact on setting would be confined to visual distraction on the

upland above. The noise impacts would be within acceptable limits. The garden's role as place of contemplation and remembrance would not be seriously affected. The effect of the proposal would be of minor significance. Cadw and the Caerphilly CBC Heritage Officer concur with the assessment and the conclusions. Having visited the site, I agree that the effect on the garden would not be significant.

266. There were objections on the grounds of potential damage to buried archaeology and scheduled monuments as well as inadequate surveys of this important historic landscape. The surveys were carried out in accordance with written schemes of investigation approved by GGAT. Neither GGAT (the Councils' adviser) or Cadw have raised any concerns in this regard. All scheduled monuments have been taken into consideration. I note that any damage caused to a scheduled monument would be a criminal offence. GGAT have recommended that a condition requiring the applicant to submit and implement a detailed written scheme of Investigation for a program of archaeological work to protect the Archaeological resource should be attached to any consent. This is standard practice in these cases and is included in the recommended conditions below..

267. The assessment considered the effects on heritage assets in Pontypridd town centre – Old Bridge and Ynysangharad Memorial Park. The conclusion reached was that their significance would not be affected by views of 3 turbines in one direction. I have no reason to disagree with this assessment. The Church of St Mabon was included in the Stage 1 Setting Assessment, where the effects on the Church were scoped out. Cadw agreed that more detailed assessment was not required. The grade II listed memorial is located in the churchyard of St Mabon's to the northwest of the church. Its significance derives from the aesthetic value of its sculpture, its historical (associative) value with the mining disaster and coal mining more generally and communal value for its importance to the community. The monument is experienced within its rural churchyard setting and the significance of the monument would be unaltered by the proposal.

268. The topic of cultural heritage has been addressed. The impact on identified heritage assets (including Scheduled and unscheduled monuments) have been considered in the ES. The comments and assessments of Cadw and Glamorgan Gwent Archaeological Trust have been received. A SOCG between the Applicant and Cadw has also been submitted. This confirms that Cadw are content with the assessment in the ES apart from the issue of the cumulative impact on the setting of Caerphilly castle. In these circumstances, I concluded that a hearing on cultural heritage matters was not required and that this topic would be considered on the basis of the parties' written representations. Objectors refer to the concerns of Professor of Archaeology Nash. He has not made any representations on this application and it is unclear whether he has viewed the ES and other evidence.

269. The other points raised in relation to cultural heritage matters are not supported by the evidence or the statutory consultees and they do not alter my conclusions on this issue.

270. Overall, I conclude that the proposal would have moderate (significant) adverse effects on the setting of Caerphilly Castle and Llanbradach Fawr and its associated listed barn and range. The effects on other heritage assets, after mitigation, would be at most minor and not significant. The identified adverse effects would mean that the proposal would be in conflict with the statutory test, and national Policy and guidance. It would also be in conflict with the key objectives of the Caerphilly CBC LDP and Policy AW7 of the Rhondda Cynon Taf LDP.

OTHER MATTERS

Noise

271. I am satisfied that the noise surveys and assessment have been undertaken in accordance with ETSU-R-97. Whilst the noise assessment indicated that predicted turbine noise levels would meet the requirements of ETSU-R-97, some concerns were raised because the upper daytime noise limit was set at its maximum value. This was chosen because of the benefits of renewable energy generation that would be curtailed if a lower limit were applied. The applicant explained that this has been the case at other windfarms considered under the DNS process.

272. Discussions have taken place with environmental health officers from both councils, and it was agreed that a daytime noise limit can be set at the greater of 38 dB LA90 or plus 5 dB above background, with the exception of 4 noise limit locations in Senghenydd where the maximum daytime lower limiting value of 40 dB LA90 or plus 5 dB above background would be applied. However, this would only occur under certain wind conditions that does not include the prevailing wind conditions. It should also be noted that that the predicted noise levels presented assume downwind propagation in all directions which cannot occur in practice. So the figures are very much a worst case scenario. I conclude that the proposal would comply with the relevant guidance in ETSU-R-97. Environmental health officers from both councils attended the hearing and confirmed that they were satisfied that the acoustic assessment was robust and that they agreed with the conclusions reached and the suggested noise conditions. Concerns were raised about the possible effects of Excess Amplitude Modulation (AM) being present in the noise immissions from the proposed turbines. This can also be addressed by a suitable condition.

273. Several objectors referred to ETSU-R-97 as being outdated, and that it is proposed to issue new guidance. They also refer to the fact that this has been acknowledged recently by the then Minister for Climate Change. They refer to the need for new standards based on Institute of Acoustics research and World Health Organisation standards. However, ETSU-R-97 remains the relevant guidance in Wales until such time as it is replaced or updated.

274. Appropriate control measures can be put in place through the imposition of planning conditions to ensure that noise impacts would be controlled. As a result, the noise effect associated with the cumulative and isolative operational effects of the proposal would be within acceptable levels. The proposal would comply with Policy CW2 of the Caerphilly Local Development Plan and Policies AW 5 and AW 10 of the RCT LDP, and FW Policy 18.

Mining – risk to coal tips

275. Significant concern was expressed regarding possible effects on coal tips and old workings associated with mining. Much of the focus was on the Albion tips near Cilfynydd. This consists of two tips as a result of the removal of material to a higher level as part of a land reclamation scheme. The concerns relate to the stability of the tips, which are subject to ongoing monitoring and remedial drainage works, especially in the light of Welsh Government commitments to ensure coal tip safety.

276. The ES has considered the potential impacts of the proposal on mine tip stability. The two nearby tips have been assessed. There is no reported risk to the Llanbradach tip. The ES concludes that whilst the Albion tip is classed as high risk category D, remedial works have taken place in the form of re-shaping and the introduction of water control measures. In addition, the Lower Albion Tip was subject to subsequent recent remedial

action, whereby material was removed, and an enhanced (pumped) drainage system was installed, together with monitoring telemetry. The closest turbine position (turbine 3) is located approximately 700m from the Albion Lower Tip (the part of the tip that gave cause for concern and that was subject to the recent remedial works) and does not directly border the coal tip. The design, construction working practices and operation of the project would take the coal tips into account and make sure that surface water flow towards the tips does not increase as a result of the project. The Council and other statutory bodies would undertake to only approve an infrastructure and drainage design which meets this requirement. Monitoring of groundwater levels and flows beneath the site is also proposed. The ES concludes taking into account the distance to the tips and mitigation that the development would pose a low risk to the Albion and Llanbradach tips.

277. The Coal Authority had no objections to the proposal. RCT CBC Tips Team noted the importance of the drainage design for the Proposed Development and mitigation measures to control surface water run-off. The implementation of the construction phase drainage would be the responsibility of the Principal Contractor and would be implemented by the CEMP and Construction Method Statements. The Contractor would be required to demonstrate that the drainage system does not create new or increased discharge into/below the mine tips; or into existing mine tip drainage systems. At the Hearing the applicant confirmed that this would not be drainage design by trial and error. The drainage strategy was in place and the fine design would be approved by the Local Planning Authority. I note that RCT are also the SUDS approval body and the development would require SUDS consent. The Council provided the latest tip report, which shows the results of the latest inspection. The identified risks were all low with one medium requiring a solution in the future. There was no evidence that the proposed access to the turbines would impact on tip stability and no concerns were raised by statutory consultees in this regard. The LPA had no objections to the proposal based on the available information.

278. Whilst I recognise the legitimate fears expressed by political representatives and local residents, the evidence leads me to conclude that the safety risk as a result of this development is low. I do not consider that planning permission should be withheld for this reason.

279. Concerns have also been raised regarding land instability, ground conditions and land contamination. Chapters 7 and 12 of the ES has assessed the mining, hydrology, geology and hydrogeological conditions on the Proposed Development site. The applicant confirms that prior to construction, a thorough Ground Investigation would be undertaken in the area of proposed infrastructure. The intention of this is to verify the findings of desk-based the geology and mining studies In the event that there were any issues with unforeseen land stability, it is recommended that conditions are imposed to ensure that investigatory works, and any measures necessary to ensure the safety and stability of the project, are carried out prior to the commencement of development. The statutory consultees and LPAs did not raise any concerns in relation to seismic vibration effects of turbines. Planning conditions to deal with the risks associated with contamination of the site and any unforeseen contamination are also recommended.

280. I conclude on these topics that the proposal would comply with Policies CW2 and CW5 of the Caerphilly CBC LDP up to 2021, and Policy AW10 of the Rhondda Cynon Taf LDP.

Impact on Public Rights of Way

281. A number of PROW cross the site. Therefore, during construction and decommissioning health and safety requirements would make it necessary to manage the

use of PROW where they come within close proximity to construction activities and development infrastructure. Temporary closure orders may be required and arranged through consultation with the relevant LPAs, for example where the existing Byway Open to All Traffic (BOAT) is being upgraded for use as an access track. Where possible temporary alternative routes would be provided. These issues would be addressed in a Construction Transport Management Plan required under condition no. 11.

282. The application includes a proposed Strategic Recreation Framework, the aim of which is to provide for improving recreational access to the site. Implementation of the improvements within the framework would be controlled by a planning condition.

283. A particular concern was raised by an objector (not a local resident) in regard to the blades of one turbine potentially oversailing a BOAT. The reference to an appeal decision in England is not directly relevant as the circumstances of this case are different to that example. There is no separation distance stipulated in any guidance or policy of Welsh Government, as Technical Advie Note 8 has been revoked. However, oversail is an issue to be considered.

284. The applicant argued that there would be access anyway as the site is on open access land. I do not agree. This point does not apply as some users must follow the byway. I note that the degree of potential oversail is minor and that the 50m micro-siting allowance may address the issue. However, this is not guaranteed as siting may be restricted by other environmental constraints. A condition could require that the relevant turbine should not be brought into use until the BOAT has been diverted. I consider that this condition would be necessary and appropriate. I disagree with the applicant and conclude that the Construction Traffic Management Plan condition would not be sufficient to address this specific issue. If the diversion were ultimately not to be required, then the applicant could apply to the LPA for removal of the condition. Caerphilly CBC Rights of Way officer confirmed that subject to these conditions including the access improvements in the Strategic Recreation Framework, the concerns raised had been addressed.

285. The Green Lane Association had objected to the improvement of the BOAT in order to provide access to the development. The use of the BOAT was specifically advocated by the LPA, who wished to see as many existing tracks as possible improved and used to serve the development. The improvement would only affect part of the route. In these circumstances, I do not afford this objection significant weight.

286. Several objections refer to potential effects on equestrian users of the site. I note that the applicant has attempted to engage in constructive dialogue with national and local groups. As noted above the potential effects on existing PROW can be addressed by conditions. The site is within an area of open access land where riders can choose their route and avoid tracks if that is their preference. Whilst I note the objections from a number of riders in the area, no objections were received from the British Horse Society or the Open Spaces Society. The applicant indicates that consultation has taken place with these bodies. Both LPAs have confirmed that there were no outstanding issues in relation to PROW.

Shadow flicker

287. Shadow flicker is an event that can occur when the shadow of a moving when turbine blade passes over a small opening such as a window, briefly reducing the intensity of lace within the room I'm causing a flickering effect. It occurs when a certain combination of conditions prevail as a location on certain times of day and months of the year. Shadow flicker may have a negative effect on residents and occupiers of dwellings.

288. The ES contains a shadow flicker assessment to identify properties which could experience this effect. Applying worst assumptions, which does not consider shielding or screening effects from buildings trees or other vegetation orientation of the property windows and turbines. The assessment identified 40 properties as potentially experiencing significant shadow flicker effects. All of these properties exceed the threshold of 30 minutes of shadow flicker experienced by an individual property in any one day of the year. Four properties have also been identified as potentially experiencing significant shadow flicker effects. The turbines would need to be monitored by a shadow flicker module. The module would enable turbines to be shutdown automatically whenever conditions could lead to the occurrence of shadow flicker. Should any residents experience shadow flicker effects, mitigation would be explored to limit these effects. If other measures do not satisfactorily mitigate effects and the relevant turbines can be controlled via the shadow flicker module. These mitigation measures can be required by planning condition. I therefore conclude that the proposal would comply with Policies CW2 and SP6 of the Caerphilly CBC LDP up to 2021, and Policies AW10 and AW13 of the Rhondda Cynon Taf LDP.

Safety

289. Concerns were raised about the safety of the proposed turbines and the various dangers which could be presented if they were to topple, if blades were to sheer off, if they were to spin out of control or to catch fire. Reference was made to several incidents that have occurred involving wind turbines catching fire or blades breaking. This included reference to the website of Scotland Against Spin, whose statistics are apparently based on press reports. I have no basis on which to challenge or accept these statistics or their relevance to modern turbines. The applicant responded to the effect that in In the UK and elsewhere, it is extremely rare for structural failure of turbines to occur. With approximately 9,000 turbines installed the UK, there are scarce examples of turbines having failed structurally in some way. Twyn Hywel is designed and would be constructed in accordance with Health and Safety Executive legislation, the Construction Design and Management Regulations and independent statutory bodies in review of design, as well as the most up to date Wind Turbine Safety Rules published by the Energy Institute.

290. The ES provides the following information in this regard. The construction and operation of the proposed turbines would be managed within the requirements of a number of health and safety regulations Including the Construction (Design and Management) Regulations 2015 and the Health and Safety at Work etc. Act 1974. A design hazard elimination and management record has been compiled and used as a design tool to consider construction, operation and future decommissioning of the proposed turbines. The guidance is clear that major accidents and disasters can also be scoped out of the ES where proposed design measures or compliance with legislation and best practice would minimise the likelihood of a major accident occurring. Specific to the Proposed Development, this relates to the failure of the structural integrity of turbines or a mechanical fault. Modern turbines are fitted with sensors which detect if wind speeds are too high to operate safely, resulting in a shutdown. This prevents excessive wear and damage to the gearbox and reduces the risk of turbines catching fire, the occurrence of blade failure or even the failure of the structural integrity of the turbine itself. Turbines and associated equipment would be procured and constructed to comply with both strict UK and internationally recognised health and safety standards, the high design standards specified by the manufacturer and would be maintained on a regular basis in accordance with the high bar for operational maintenance set by original equipment manufacturers specification and safety owns UK wind turbine safety rules. The occurrence of wind turbines catching fire from suspected lightning strikes is also very rare, and there is no

evidence that human life has been that risk from such events occurring in the past, assisted by turbine designs that include an embedded lightning protection system.

291. In response to consultation, the Fire Authority stated that the applicant should consider the need for the provision of: adequate water supplies on the site for firefighting purposes; and access for emergency firefighting appliances. It did not, however, make any objection to the Proposed Development. The Health and Safety Executive made no comments to the proposal.

292. There are no minimum separation distances between dwellings and turbines in planning Policy or guidance in Wales. The reference to policies and standards in other countries do not apply in the UK. The evidence is that the normal operation of the turbines would not cause vibration effects. In the event of ice accumulation or similar issues the turbines are fitted with vibration sensors and would shut down if excessive vibration occurs.

293. Compared to the many thousands of turbines in operation across the world examples of failure are rare. I have no reason to believe the wind turbines proposed here would not be manufactured, erected and maintained in line with relevant safety standards and industry good practice. I am satisfied that the safety of the proposed windfarm, and consequently of those involved in its construction and operation as well as those living around it, has been properly considered and taken into account in its design, location and other features. I do not consider that the proposal would present an unacceptable risk to the health and safety of the local community.

294. Turning to aviation and telecommunications, both Bristol and Cardiff Airport raise no concerns regarding the proposed development and NATS clarified that the proposed development had been examined from a technical safeguarding aspect and would not conflict with safeguarding criteria and did not object to the proposal. A condition relating to aviation lighting would also maintain aviation safety. Arqiva raised no concerns regarding the impact of the development on their existing broadcast network. This is set out in a SOCG. SOCG with other statutory undertakers have also been completed.

Transport and Access

295. The application is accompanied by a Transport Assessment and Transport Management Plan Report as part of chapter 5 of the ES. Abnormal loads associated with the wind turbines would be delivered from the proposed port of entry (Swansea) to the site via the M4, A470, A472 and via the new link road between the proposed site access junction and the A472/B4255 roundabout. This link road serves existing employment sites and uses north of Nelson. Existing traffic conditions have been assessed in the ES. The main impact would be during the construction phase. Details of all trips generated to the site have been provided including details of abnormal indivisible load deliveries.

296. The assessment concludes that the HGV traffic associated with the construction of the proposal would not raise any road capacity issues. Any local adverse effects would be mitigated through the implementation of a construction traffic management plan during the construction phase. This would be by a condition requiring details to be submitted to the local planning authorities and Welsh government prior to construction. These issues have already been assessed in outline in the submitted Transport Management Plan Report which considers abnormal load delivery, access constraints, convoy movement strategies and a traffic management plan for construction traffic.

297. A SOCG with Welsh Government confirms that the outstanding matters can be addressed by conditions so that the impact on the national trunk road network would be acceptable.

298. Both local authorities have confirmed that there are no existing highway safety issues that would be exacerbated by the development. There is no objection to the proposal subject to conditions requiring the submission of a Construction Traffic Management Plan. The outstanding issues can be addressed by means of suitable planning conditions. Welsh Government highways suggested several conditions that I have included in my recommended conditions (see conditions section below).

299. Overall I conclude that the proposal would comply with Policy CW3 of the Caerphilly CBC LDP, and Policy AW5 of the Rhondda Cynon Taf LDP.

Other objections

300. Many objectors (including CPRW) challenge the basis of the PAAs in FW. FW is the part of the development plan and its underlying rationale cannot be challenged in this way through the planning application process. The need for renewable energy is undeniable and FW Policies 17 and 18 are supportive. The Welsh Government has not announced any intention to depart from these policies whilst alternative sources (such as off shore wind or tidal power) are explored.

301. Objectors raise issues of the effect of the development on flooding. The submitted Flood Consequences Assessment within Chapter 7 of the ES concludes that the Proposed Development would not be subject to an unacceptable level of risk, nor would there be potential increased flood risk elsewhere. The construction, operation and decommissioning of the Proposed Development is not expected to result in any significant effects on the water environment, provided that all recommended mitigation measures are put in place, as can be required by conditions.

302. I note the concerns of objectors regarding the impact of the development on drainage, private water supplies and on watercourse crossings. An assessment of impacts on private water supplies and watercourse crossings has been provided. The assessments contain mitigation measures and a water quality management plan to address any issues that may arise. As noted above a drainage strategy for the site would be submitted for approval and the development would require a separate consent under the sustainable drainage regime.

303. Several objectors have cited concerns over the impact that the visual effect of the turbines, combined with others in the wider area, would have on tourism and the associated impact on local businesses and the economy. As with other receptors tourists would inevitably comprise individuals with a broad range of disposition towards wind turbines. Whilst there would be those who would find such features as harmful to their enjoyment of the landscape there is no evidence to suggest that this would have a significant impact on tourist behaviour, for instance in terms of destination choice. The applicant refers to a Scottish study which found no relationship between tourism employment and wind farm development (paragraph 2.23 of the ES).

304. Concerns were expressed regarding the cumulative impact of the proposal with a major development for a Synchronous Condenser adjacent to the National Grid Cilfynydd substation at Llanfabon. This development is unrelated to the proposal and is an area containing pylons, overhead lines and extensive plant and apparatus. Possible cumulative effects that the proposal may have in combination with existing or consented developments have been assessed in the ES. The application for the Synchronous Condenser was submitted on 17th July 2023, whereas this DNS application was submitted on 24th May 2023. So the applicant couldn’t have had regard to it in the submissions. Cumulative effects should be assessed as part of the consideration of the application for the Synchronous Condenser scheme.

305. Concerns were raised regarding noise, dust, disturbance and other impacts during construction. These impacts would be for a temporary period and would be controlled by stipulations in the CEMP to control noise and dust, restrict working hours, and reduce impacts as far as possible. The applicant would have community engagement team to liaise with the community and to act upon any concerns raised. Provisions for safe and considerate construction working would be detailed in the CEMP and would be assured under the Construction, Design and Management Regulations.

306. There is no evidence that a local authority pension fund investment in a project such as this would cause any bias. LPAs are only consultees and in this case both LIRs were the subject of reports to committees of elected members.

307. The issue of enforcement of conditions and Council resources has been the subject of many objections. The planning system relies on, and the decision-maker is entitled to expect, that conditions would be enforced. In this case the applicant has also recognised this issue and has indicated a willingness to provide funds to pay for enforcement for this project to be managed through planning performance agreements. Any funds would be ring fenced for this purpose only.

308. The examples of cases elsewhere are in a different Policy context i.e. outside Wales and/or have circumstances that do not compare with this proposal. It is an established principle that each case must be considered on its own merits.

309. The identity of company directors and issues such as whether the applicant is a Welsh company are not relevant to the determination of a planning application. For information, the applicant states that the company is based in Cardiff and meets the Welsh Government definition of a Welsh company. Similarly guidance is clear that community benefit funds cannot be taken into account in the determination of a planning application. I simply note that such a fund is to be provided (further details in the applicant's evidence and below in the conditions and planning obligations section).

310. An objector claims that HM Treasury Green Book Guidance should have been applied at some level to this project - either at Policy or project level or in advising ministers. This guidance is aimed at those providing advice to decision makers on Policy and proposals involving the use of public resources. The objector refers to an opinion of Counsel related to a proposal by National Grid. National Grid is an arm's length body falling within the scope of the Green Book Guidance. No information is supplied as to the outcome of this advice in the decision-making process. In contrast this development is a privately funded proposal by a developer, which does not fall within the scope of the guidance. The application of Green Book guidance to Policy is not a matter related to the consideration of individual planning applications. I also note that a reply in respect of the application of this guidance to the development of Future Wales has been provided to the objector. Impacts on Natural Capital are assessed in the ES and environmental information.

311. Objections related to the public consultation process undertaken by the applicant and PEDW. I note that the applicant has set out the pre-application consultation process and responses in a Pre-Application Consultation Report [Document 5.1 dated May 2023]. This document and the ES chapters set out how the responses received have been taken into account into consideration. I am content that the statutory pre-application consultation has been undertaken in accordance with the legal requirements. The LIRs of both Councils also set out the consultations undertaken. I have set out in the procedural matters above how the application was publicised and several rounds of consultation were undertaken by PEDW. In relation to the Gunning Principles there has been extensive consultation on the application prior to submission and during the course of the DNS application process. Including consultations by PEDW in respect of further

information and opportunities to comment on any further submissions. I therefore afford this claim little weight.

312. The submitted desk-based terrestrial television interference assessment predicts that there may be a possibility of interference. Therefore the applicant advises that it is good practice to monitor for any potentially affected dwellings for television interference leading to a post-construction survey with the aim of investigating and mitigating any issues. This would be secured by planning condition.

313. I have considered all other matters raised and conclude that they do not affect my conclusions.

Benefits of the Scheme

314. The climate change chapter advises that during construction and before operation, the Proposed Development would create more carbon emissions than it removes from the atmosphere. The carbon balance assessment has calculated that the "payback time" of CO_2 emissions to be in the region of 1.5 years (or 18 months). That is the length of time for the proposal to be considered a net avoider of emissions rather than an emitter. The annual CO_2 saving is estimated at 124,658 tonnes. Over the lifetime of the wind farm it estimates a total net saving of 5,424,918 tonnes of CO_2. This does not take into account the carbon benefits of planting and biodiversity net gain. The calculation does take account of carbon impacts due to loss of peat. This is considered to be minimal for this site based on the site investigations reported in chapter 7 of the ES.

315. Future Wales Policy 17 confirms Welsh Government's strong support to the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. It explains that in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and Welsh Government's target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency. The subsequent July 2023 target is for 100% electricity from renewable energy sources by 2035. I have also taken account of the Policy, research and progress in meeting targets updates provided by the applicant to Hearing 1.

316. It is clear that on-shore wind energy has an important role to play in meeting the Government's renewable energy targets. This scheme includes provision for a direct connection to a nearby major national grid substation and when constructed can make an immediate generation contribution of 92.4 Mega Watts (MW) sufficient to power up to 82,000 households per annum. This is a scheme that would significantly add to the Country's renewable energy generation capacity. It is a matter to which I afford considerable weight.

317. The scheme would also result in local economic benefits, particularly during the construction phase to which I attach significant weight. These are detailed in the Socio-Economic Impact Report accompanying the application. It is anticipated that 200 construction jobs would be created in Wales and 14 permanent jobs in south Wales and 18 across Wales. Overall, the project is predicted to generate Gross Value Added (GVA) of £75m across Wales, of which some £34m would be in South Wales.

318. There would be an annual community benefit fund of £7,500 per MW (index linked to match inflation) would be provided, which would exceed £30 million over the lifetime of the project. Whilst this would align with WG support for the delivery of such local benefits, it has also made it clear that this is not a material consideration in the assessment of planning applications.

319. The other identified benefits are:

- Net Benefit for and enhancement of biodiversity through a Habitat Management Plan.
- Proposed Strategic Recreational Framework – a commitment to improve access to quality green space and enhance participation in recreational activities,
- The provision of Heritage Interpretation measures on site.

Conditions and Obligations

320. The suite of suggested planning conditions, which reflects the conditions agreed between the applicant, Caerphilly CBC, RCT CBC, NRW and other interested parties at the relevant hearing. At my request additional conditions to address the concerns raised regarding amplitude modulation noise effects and site investigations for land stability at turbine foundations were added. After the hearing the applicant provided a revised list, which was circulated for comments.

321. Caerphilly CBC suggested less examples of works in condition 4. I consider that the examples given by the developer are reasonable and adopt that wording. I have adopted the revised wording suggested for several other conditions.

322. Having considered the submissions of NRW, I am satisfied that all matters requested to be addressed have been included in the conditions. The NRW post-hearing response indicated that a revised wording for condition 20 had been substituted to that agreed to prior to the hearing. I adopt the wording as approved by NRW as it is more specific regarding the requirements for an operational monitoring strategy and turbine curtailment strategy. I have added the wording related to the guidance on Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation to condition 37 as suggested by NRW. The other matters in NRW's alternative wording were already addressed in the condition as drafted. As golden plover is the only bird species at risk of collision then it would not be reasonable the relevant monitoring condition to refer to other species. I agree with NRW that the monitoring would be ineffective if it did not provide for remedial measures to be taken in the event that ES predictions are inaccurate.

323. The applicant had supplied a Strategic Recreation Framework document with the application. In response to concerns about its aspirational content and how the benefits could be secured it was agreed that this could be the subject of a condition. The applicant suggested a condition related to the mitigation of interference with television signals as a result of the proposal, which was omitted from the agreed list. I have included a suitable condition below.

324. Welsh Government as highway authority for the A470 trunk road directed that various conditions be attached to any permission granted by your Authority. It is not appropriate to direct the Welsh Ministers so to do. I must also consider whether planning conditions meet the legal tests as explained in the above Welsh Government Circular. I have recommended that most of the suggested conditions are included. However, two of the suggested planning conditions would not be appropriate as they cannot require applicants to enter into agreements or address matters covered by other Legislation (in this case the Highways Act) and would not therefore meet the legal tests. I have therefore omitted these proposed conditions.

325. Having regard to the advice in WG Circular 16/2014: *The Use of Planning Conditions for Development Management* (October 2014), the wording of the majority of the conditions remains unchanged save for minor amendments. I have dealt with my

reasoning for many of the conditions in my appraisal of the relevant issues above. The conditions as set out in Annex A are recommended.

326. Planning obligations provide for:

- a decommissioning fund and arrangements for its review and implementation (s106 agreement)
- grant rights of common to commoners and rights of access to the public; over the release land subject to conditions related to safety issues (s106 agreement)
- A community benefit fund (unilateral undertaking also entered into by both councils)
- The landowner and Senghenydd Youth Drop In Centre covenant to the developer not to implement a planning permission for a single small turbine on land adjoining the application site (unilateral undertaking).

327. I consider that the decommissioning fund and use/access rights are necessary, are related to the Proposed Development scheme and are related in scale and kind, and thereby meet the tests set out in Section 122(2) of the Community Infrastructure Levy Regulations 2010 and Circular 13/97: Planning Obligations. As such I afford the obligation under section 106 of the Town and Country Planning Act weight in the determination of the application.

328. I note the obligation to provide a community benefit fund and the arrangements referred to therein for its disbursement and information set out in the Socio-economic Impact appraisal and Collaborative Benefits Report. Whilst this would align with Welsh Government support for the delivery of such local benefits, it has also made it clear that this is not a material consideration in the assessment of planning applications. For these reasons I also make no further comment on the objections related to the fund and its disbursement.

329. The other obligation is a matter between the owner and developer of a small community turbine and the applicant and as such I afford it little weight in the determination of this application.

Planning Balance and Overall Conclusions

330. The proposal would have a limited impact on views from BBNP. These would not have a significant effect on landscape character. Most of the proposed turbines are within a 'Pre-Assessed Area for Wind Energy' where the likely impacts on the landscape have been modelled and found to be acceptable. The remaining 3 turbines are sited close to the Pre-Assessed Area. Policy 17 of FW enshrines the acceptance of landscape change for wind energy developments in Pre-Assessed Areas. Policy 18 is supportive of these developments subject to meeting the stated criteria.

331. The Residential Visual Amenity Assessment finds that there is no change that would lead to any individual dwelling or residential area becoming an unattractive place to live when judged objectively and in the public interest. I have concluded that there would be no significant cumulative impacts, with other existing or proposed developments. Nonetheless there would be significant landscape and visual impacts in the local area. These adverse impacts must be considered in the planning balance.

332. The scheme would give rise to a minor potential harmful impact on peat and ecology more generally. However, when the mitigation and enhancement measures are factored in, the overall effects would be positive to which I afford moderate weight.

333. I note that Cadw concludes that there would be a negligible effect on the setting of the nationally important Senghenydd Dyke, a minor effect on the setting of the cairn, which is included in scheduled monument GM456 Cross Ridge Dyke & Cairn on Twyn Hywel and moderate effects on the settings of scheduled monument GM002 and listed building Caerphilly Castle and listed buildings 13541 Llanbradach Fawr and 25539 Barn and Stable Range at Llanbradach Fawr. Cadw states that these effects are not significant effects. I agree. I have also set out the reasons why I disagree with Cadw's assessment in relation to the cumulative effect on the setting of Caerphilly Castle. Nevertheless the moderate effect on Caerphilly Castle and the listed buildings at Llanbradach Fawr must weigh against the proposal.

334. There could also be some harm due to noise and disturbance during construction and operation of the proposal. I am satisfied that these effects can be mitigated by the recommended conditions or are short term effects only. I have set out how the other relevant potential impacts have been considered and addressed in my appraisal above.

335. For reasons I have already explained I also afford significant weight to the economic benefits of the scheme and attach considerable weight to the scheme's contribution to renewable energy production. This is in line with the policy imperative of combatting climate change enshrined in FW and PPW.

336. Policies 17 and 18 of FW sets out Welsh Government's approach to promoting the increased production of renewable energy in a way that seeks to strike an appropriate balance with the protection of other relevant interests. As FW is the most recently adopted part of the development plan and contains the most directly relevant Policy to renewable energy projects of national significance. I conclude that these issues when considered in the context of FW Policies 17 and 18 would not be so significant as to outweigh the benefits of the scheme and I judge that they would not warrant refusal of the application. Whilst the harms I have identified represent some conflict with the relevant LDP policies, I conclude that when the policies of FW are taken into account the proposal would comply with the Development Plan as a whole.

337. When balancing the benefits of the scheme against the harm, in the light of relevant planning policies, I conclude overall that there is a clear case for granting permission for the development.

Appraisal – The Applications under Sections 16 and 38 of the Commons Act

Main Considerations

338. The Section 16 application is to deregister common land and provide replacement land. Seven separate areas of replacement land adjacent to the common are proposed. The area of land to be de-registered (Release Land) under section 16 amounts to approximately 46.9 ha. This is the land required for the provision of the DNS development of wind turbines, access tracks and ancillary equipment. Approximately 56.3 ha of Replacement Land is offered in exchange. The aim is to ensure that there is no overall reduction in the level of common land or grazing available and no loss of public access. Once construction is completed the majority of the release land and access tracks would be available to users of the common. This is ensured by the provisions of an agreement under s106 of the Town and Country Planning Act.

339. The Section 38 application is for consent to undertake restricted works on the common land. These are to upgrade a byway open to all traffic so that it may be used to serve the development, undertake other works to the highway and the laying of an underground cable to enable the Proposed Development to export the electricity from the on-site substation to the national grid. Once completed these works would have a limited effect on the common.

340. Welsh Government has published guidance on applications for consent under the Commons Act – Common Land Consents Guidance (August 2014). I shall refer to this as the Guidance from now on. It seeks to ensure that the stock of common land is not reduced and that any replacement land is of at least equal benefit.

341. Taking account of the Guidance and the requirements of Section 16(6) and 39(1) of the Commons Act 2006, I consider the main considerations in the determination of the common land application to be:

- The interests of those persons having rights in relation to, or occupying, the land (and in particular persons exercising their rights of common over it);
- The interests of the neighbourhood;
- The public interest, including nature conservation, the conservation of the landscape, the protection of public rights of access and the protection of archaeological remains and features of historic interest);
- Whether a more acceptable outcome could be achieved by adopting a different approach; and
- Whether any identified harm would be justified by other relevant matters, including the benefits arising from the development proposed through the associated DNS application.

The interests of those persons having rights in relation to, or occupying, the land

342. The total area of the common is 553.7 ha. The applicant has supplied details of grazing on the common. The Common is an open common with the livestock of one active grazier hefted in the west and north and the livestock of two active graziers in the south and east. Two other graziers periodically graze with cattle. This pattern of grazing on the Common is established and has been occurring at least as far back as 2005 with the northern and western areas of the Common being under-grazed by livestock. Livestock regularly move between the Common and adjacent ‘in bye’ land either on their own or as gathered for specific management tasks (shearing, dipping etc).

343. The proposed Habitat Management Plan (HMP) is an important part of the ecological mitigation and biodiversity net gain process for the DNS proposal. The applicant's evidence is that the HMP can be implemented over the Common, including the proposed replacement land areas. The HMP would not affect the use of commoners rights as currently exercised and as a result of habitat management and improvement it may benefit the commoners

344. The Applicant and the majority of registered, but inactive, commoners have entered into an agreement which secures their compliance with the HMP, in particular with respect to grazing management on the common. It is acknowledged by the Applicant and all the rights holders who have entered into agreements with the Applicant that the stocking rates required in the HMP may fluctuate as a result of the management of the habitats in the HMP. All the active graziers that currently exercise their rights to graze the Common are involved in the Proposed Development and are committed to delivery of the Proposed Development which includes being involved in the delivery of the HMP

345. There are 6,302 registered rights, and the Applicant has entered into agreements which secure control over 5,912. Of those rights not secured 330 are held by a single holding who have not objected to the applications and the Proposed Development, but the holders are not in a position to enter into an agreement at present. The small number of registered rights which are not subject to any agreement with the Applicant are not capable of preventing the successful implementation of the HMP.

346. The replacement land consists of six parcels of land contiguous with the existing common and is suitable for grazing purposes. The Land Agent acting on behalf of the applicant has prepared a report assessing the suitability of the replacement land that also addresses the above tests. He has maintained regular contact with the landowners and occupiers, Brinkers (term used locally for commoners), the Brinkers Association and other users, who are supportive of the application, as noted above. The area of the proposed replacement land is greater than the area of the release land, providing more land over which to graze their livestock as they currently enjoy. The evidence indicates that there would not be any financial detriment to the graziers.

347. The common is accessible to the public under the relevant provisions of the Law of Property Act 1925 and the CROW Act and, given that the proposal seeks to deregister the release land, the public would no longer have the right to enjoy the land in the way that it currently does. Such a loss to public rights would, to a certain degree, be compensated by the provision of an equivalent area of replacement land that is contiguous with the wider common. The replacement land is similar in topography and aspect to the rest of the common. It is also proposed that other than during periods of construction and maintenance there would be public access over the release land. This access is controlled by a legally binding planning obligation. These measures, taken together, would compensate for the loss to public rights arising from the proposed deregistration. Both Councils register no impact as a result of the secondary consents.

348. The grid connection cable would run north from the access track between turbine 5 and turbine 3. A narrow search corridor is shown traversing a small part of the registered common (1 on the application plan). Another area adjacent to Turbine 6 is also required (2 on the application plan). The cabling works would involve excavation of a strip of land around 1.5m wide, to dig the trench which would interfere with grazing rights within the vicinity of the works during installation. However, the works would be undertaken on a very small portion of the overall common available for grazing and other rights. The land would be reinstated to its former condition on completion of the works.

349. The works to upgrade the byway open to all traffic and cross the existing highway at points 4 and 5 on the plan would have a limited impact on those with rights as they would

be temporary in nature and involve an existing highway not used for grazing. The commoners and other users would have the benefit of the replacement land. There have been no objections apart from the Green Lane Association (GLA) who argue that the byway should not be re-surfaced due to loss of the off-road experience. The re-surfacing would not affect use of this short stretch of the byway or the common.

350. There would be a temporary short duration disturbance to commoners' rights of access and the rights of the public to use the common for recreational purposes. Access would remain to surrounding land. I conclude that this level of interference would have a negligible effect on grazing and access rights. As such, the proposed works would not unacceptably interfere with the interests of those having rights in relation to the land.

Interests of the Neighbourhood

351. There is no definition of neighbourhood in the Commons Act, although the guidance requires consideration to be given to whether the works would mean that local people would be prevented from using the common in the way that they are used to. Furthermore, the guidance requires consideration to be given to whether the works would interfere with the future use and enjoyment of the land as a whole.

352. The common is accessible to the public under Section 193 of the Law of Property Act 1925 and the Countryside and Rights of Way Act 2000 (the CROW Act). The common land around the application site is close to built-up areas and I noted on my site visits that it is used for recreational purposes by local residents and those visiting the area.

353. The applicant indicates that a wide range of interest groups were consulted such as the Open Spaces Society, Ramblers Association, British Horse Society and various local groups and individual users; to establish the public's amenity and recreational use of the Common.

354. I have noted above that the land available for such purposes would increase as a result of the applications. Following completion of construction all temporary fences would be removed and the new and upgraded tracks would be available for access for walking, horse riding (users can choose whichever surface is preferred) and cycling as identified in consultation with the amenity users. The DNS application includes a proposed Strategic Recreation Framework, the aim of which is to provide an indication of the potential options for improving recreational access to the Proposed Development site. Implementation of the framework would be controlled by a planning condition.

355. As set out above the s38 works of cabling and re-surfacing the byway and crossing points would have a minor temporary impact on access. These impacts would not affect access to the wider common and replacement land. I conclude that the proposals would not interfere with the future use and enjoyment of the land as a whole and I conclude that would not unacceptably affect the interests of the neighbourhood.

The Public Interest

356. Section 16(8) of the 2006 Act provides that the public interest includes the public interest in respect of: nature conservation; the conservation of the landscape; the protection of public rights of access to any area of land; and the protection of archaeological remains and features of historic interest.

Nature Conservation

357. I have found previously in this Report that the wind farm development that necessitates the cable trenching, highway works and deregistration of the release land would not have an unacceptable adverse impact on features of ecological importance and no ecological concerns have been raised by statutory consultees in respect of the

common land or DNS applications. As such, and in the absence of any evidence to the contrary, I find that there would not be a negative impact on the public interest in these terms.

Landscape

358. The release land is widely dispersed and linear in nature, reflective of the fact that the deregistration is necessary to facilitate wind farm infrastructure. They would inevitably have an effect on landscape character. The overall landscape impacts have been assessed as part of the DNS application and found to be acceptable. I have found that the replacement land is similar in character to the release land. As such, I am satisfied that there would be no unacceptable landscape impacts on the public.

Public Rights of Access

359. As I have found above, whilst the works would impede access for a very short period of time over a relatively narrow and small part of the common, the proposal would retain public access into the area. Given the small area affected and the short term nature of the s.38 works I find this impact to be minor.

360. I have noted above that public access would if anything be improved as a result of the development. The net effect of the replacement land and the availability of access on the unused release land would be an increase of 27.6 ha. available for public access to the Common. The Common is regularly used by the public. Free access would be permitted to all users of the common over all the release land post-construction, except when necessary works or maintenance is carried out. Thus, for the same reasons as set out in the 'Interests of the Neighbourhood' section, I find that the proposal would not have a negative impact on public rights of access.

Archaeological Remains and features of Historic Interest

361. The issue of archaeological remains and features of historic interest affected by the development has been considered above in respect of the DNS application. On the basis of the evidence before me, I am satisfied that the public interest in respect of archaeology of the site would not be unacceptably affected in these terms. I have concluded that the benefits of the Scheme outweigh the moderate adverse effects on the settings of Caerphilly Castle and two listed buildings adjoining the site at Llanbradach Fawr.

Public Interest Conclusion

362. Overall, I conclude in relation to matters of public interest that there would be a no negative impact on the public interest.

Alternative Scheme

363. It is necessary to consider whether a more acceptable outcome could be achieved by adopting a different approach to the proposed deregistration and provision of replacement common land. The applicant's site selection process was influenced by Welsh Government Policy in Future Wales. Based on the available evidence, and bearing in mind the nature of the development, and the fact that the area of land subject to the s.38 works and the release land comprises the area strictly necessary to occupy the wind farm infrastructure and undertake necessary construction, I am satisfied that there is no alternative scheme before me that would reduce the overall impacts.

Other Relevant Matters, including the Benefits of the Development

364. The appraisal of the DNS application in this Report sets out the benefits and other matters in favour of the proposed wind farm development. This includes an estimated generation of renewable energy of 92.4 Mega Watts (MW) sufficient to power 82,000 homes annually.

365. The Policy section of this report outlines the support for developing renewable and low carbon energy to meet future needs. Indeed, national Policy states that significant weight should be attributed to the need to meet Wales's international commitments and the Welsh Government target of generating 70% of its consumed electricity by renewable means by 2030 and the subsequent target for 100% electricity from renewable sources by 2035 in order to combat the climate emergency. As previously stated, eleven of the fourteen turbines are located within the 'Pre-Assessed Area for Wind Energy' as defined in Policy 17 of FW. This Policy provides a presumption in favour of large-scale wind energy development in such areas.

366. The scheme's contribution to combating the climate emergency is afforded considerable weight in favour of allowing the common land application. I also attach significant weight to the social and economic benefits that would be realised by the development. Collectively, such matters weigh substantially in favour of the common land applications.

Balancing Exercise and Overall Conclusions - Common Land Applications

367. Therefore, having considered all matters raised, I conclude that the secondary consent applications should be allowed, and a deregistration and exchange order made and consent granted to carry out restricted works, subject only to planning permission being granted for the development proposed through the DNS application.

Appraisal - Change of use from residential to site project office at Maes Diofal Farm

368. The change of use from residential to site project office relates to the existing farmhouse, which is a large cottage with a large garden. The surrounding farm buildings and land would remain in agricultural use. The proposal is to reuse the existing residential building as a project office during construction of the proposed wind farm, with ancillary use thereafter for necessary maintenance and operations office use. The proposed officer would be subsidiary to the main construction office and would only be used by a small number of staff. No material alterations or changes to the layout of the building are proposed. The change of use is proposed for the life of the DNS development, if approved.

369. The site is within Caerphilly Council area. There would be no conflict with the criteria in Policy CW2 of Caerphilly LDP. Policy CW15 C (iv) allows development associated with the provision of infrastructure that cannot reasonably be located elsewhere. As set out above in the report on the DNS application, the proposal is associated with a large wind energy project that accords with the provisions of Future Wales. The project would make a significant contribution to meeting Welsh Government targets for the generation of electricity from renewable sources.

370. The Local Planning Authority considered that this secondary consent aligns well with the provisions of Policy CW15 and there would be no anticipated unacceptable impacts from the development proposed. I note that the site is removed at some distance from other properties and there are no anticipated issues with levels of activity, traffic, noise or parking. The applicant has confirmed that the proposed offices would only be used by a small number of staff. As a result there would be no more traffic than would occur for a typical residential property. There is sufficient parking available. No objections of substance in respect of the application have been received.

Conclusion

371. I conclude that as the application for a change of use accords with the LDP and would have no harmful effects then it should be allowed. I agree with the principle of the applicant's suggested conditions and recommend that they be attached to any consent.

RECOMMENDATIONS

DNS Application

372. That planning permission be granted for the development proposed under the DNS application, subject to the planning conditions set out at Annex A.

Applications under the Commons Act

Application for the deregistration and exchange of Common Land under Section 16

373. That the secondary consent application be granted and a deregistration and exchange order be made, subject to planning permission being granted for the DNS application.

An application for consent to construct works on common land under Section 38

374. That the application for consent to carry out restricted works be granted subject to planning permission being granted for DNS Application.

Planning Application for a Change of use to site project office at Maes Diofal Farm

375. That the planning application be granted, subject to the following conditions:

1) The development hereby permitted shall be begun before the expiration of five years from the date of this permission.

   Reason: To comply with Sections 91 and 93 of the Town and Country Planning Act 1990.

2) The use shall be discontinued and cease on the 45th anniversary of its implementation. The Local Planning Authority shall be informed in writing of the date of implementation within one month of the use commencing.

   Reason: To ensure the development is carried out in accordance with the application

3) The change of use hereby approved shall not have effect unless and until the associated Development of National Significance application has been approved.

   Reason: To ensure the development is carried out in accordance with the application

376. In making these recommendations, 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 recommendation is in accordance with the Act's sustainable development principle through its contribution towards the Welsh Ministers' well-being objectives of embedding our response to the climate and nature emergency in everything we do.

A L McCooey

INSPECTOR

APPENDIX A:

Schedule of Recommended Planning Conditions

1. The development hereby permitted shall be begun before the expiration of five years from the date of this permission.

   Reason: To comply with Sections 91 and 93 of the Town and Country Planning Act 1990

2. The development shall be carried out in accordance with the following plan and documents:
   - ES Figure 4.1a: Infrastructure Layout
   - Environmental Statement Volume 1 (Written text)
   - Environmental Statement Volume 2 (Figures)
   - Environmental Statement Volume 3 (Appendices and figures of appendices)
   - Environmental Statement Volume 4 (Visualisations)
   - Environmental Statement Volume 5 (Confidential appendix)
   - Regulation 15(2) submission.

   Reason: To define the scope of this permission

3. The development hereby approved shall endure for a period of 45 years from the date on which electricity is first exported on a commercial basis from the wind turbines ('First Export Date'). The developer shall notify the relevant Local Planning Authorities in writing within 28 days of the First Export Date.

   Reason: To comply with the terms of the application.

4. Construction works which are audible at the boundary of any residential receptor shall not take place outside the hours of 8:00am to 18:00pm Monday to Friday, 9:00am to 1:00pm on Saturday. No construction work shall be conducted on Sundays or Bank Holidays. This is with the exception of the works described below.
   Outside of these hours, development shall be limited to emergency works and works which must be completed before ceasing, such as concrete pouring, erection of turbines, turbine testing, commissioning works, cabling and electrical testing, emergency work and dust suppression and the developer shall notify the relevant Local Planning Authorities in advance of these works taking place.

   Reason: To protect the living conditions of residents and prevent noise pollution in accordance with Policies AW5 and AW10 of the Rhondda Cynon Taf Local Development Plan; and to protect the amenities of local residents in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

5. For the purposes of this planning permission pre-construction site investigations are defined as pre-commencement surveys including for ground conditions, ecology, water quality sampling and archaeological investigation. pre-construction site investigations shall only take place in accordance with a scheme which has first been approved in writing by the relevant Local Planning Authority.

   Reason: to protect the living conditions of residents and prevent noise pollution in accordance with Policies AW5 and AW10 of the Rhondda Cynon Taf Local Development

Plan; and to protect the amenities of local residents in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

6. Except for pre-construction site investigations no development shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the relevant Local Planning Authorities. The CEMP shall include:
   - General site management: details of the construction programme including timetable, site clearance, details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain.
   - Resource management: details of fuel and chemical storage and containment.
   - Traffic Management: details of site deliveries, plant on site and wheel wash facilities.
   - Pollution prevention: a Pollution Prevention Plan to demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures, incident response plan and a pollution control system during earthworks and construction.
   - Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details, to include an ecological clerk of works, including details of reporting during construction.
   - A construction noise management plan, in accordance with BS5288, including identification of access routes to be carried out, mitigation measures and a scheme for the monitoring of noise.
   - A Species Protection Plan to include measures for the protection of breeding birds (including Golden Plover), reptiles, otters, water vole, and dormice populations on both the site and access track, including preconstruction surveys and mechanisms to monitor outcomes and take remedial action;
   - A habitat protection plan to include measures to minimise direct habitat impact, and protect adjacent habitats;
   - Construction method statement for the grid connection cables;
   - A protocol for Environmental Compliance Audit;
   - Site restoration plan (post construction);
   - Peat management plan; and
   - Details of measures to control dust pollution and light spill;
   - A Surface Water Management Plan.

   The CEMP shall be informed by pre-construction site investigations and implemented as approved during construction of the development.

   Reason: In the interests of biodiversity and preventing pollution in accordance with Policies AW8 and AW10 of the Rhondda Cynon Taf Local Development Plan; and to ensure adequate protection for natural heritage and species protection, the water environment and highways in accordance with Policies CW3, CW4, CW5 and SP10 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

7. Except for pre-construction site investigations no development shall commence until a Construction Waste Management Plan (CWMP) has been submitted to and approved in writing by the relevant Local Planning Authorities, in consultation with NRW. The CWMP shall include:

- The location of stockpiles and other storage areas to minimise the risk of pollution;
- The use of good practice in the design of storage areas and the use of suitable containers;
- The use of sheeting, screening, and damping where appropriate and practicable;
- The control and treatment of runoff from soil and soil stockpiles;
- Minimising storage periods;
- Minimising haulage distances;
- Details of the identification, classification, quantification and, where practicable, appropriate segregation of materials; and
- Details of the disposal method of any materials that cannot be reused.

The approved CWMP shall be implemented as approved during construction of the development.

Reason: In the interests of general amenity and pollution prevention in accordance with Policies AW5 and AW10 of the Rhondda Cynon Taf Local Development Plan; and in the interests of the amenity of the area and pollution prevention in accordance with Policies CW2 and CW5 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

8. No development shall take place until a written scheme of historic environment mitigation has been submitted to approved by the relevant 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: To identify and record any features of archaeological interest discovered during the works in order to mitigate the impact of the works on the archaeological resource in accordance with Policy AW7 of the Rhondda Cynon Taf Local Development Plan; and to identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource in accordance with paragraph 6.1.27 of Planning Policy Wales Edition 12.

9. Within six months of the first export date, a Historic Environment Plan providing interpretation measures within the site shall be submitted to the relevant Local Planning Authority for approval in writing. The Historic Environment Plan shall include measures to proposals to improve access to the historic assets within the site including details of interpretation/information panels and a programme of works. The approved Historic Environment Plan shall be implemented within six months of approval.

   Reason: to mitigate the impact of the development on the archaeological resource in accordance with Policy AW7 of the Rhondda Cynon Taf Local Development Plan, and Policy SP6 of the Caerphilly County Borough Local Development Plan up to 2021.

10. Within 45 years and six months following the first export date, or within 12months of the cessation of electricity generation by the approved development, whichever is the sooner, the turbines and all associated infrastructure and works hereby approved shall be removed from the site and the land returned to its former agricultural status, in accordance with a decommissioning and site restoration scheme which has been submitted to and approved in writing by the relevant Local Planning Authority. The decommissioning plan shall include:

    • pollution control measures;

• The retention of all existing and new planting implemented as part of the approved scheme;
• The developer shall notify the Local Planning Authority in writing no later than one month following cessation of electricity generation.

The approved restoration scheme shall be implemented in full within 12 months of the cessation of electricity generation

Reason: To ensure the impacts of the development exist only for the lifetime of the development, in accordance Policies CS2, AW5, AW6, AW7, AW8, AW10, AW12, AW13, AW14 and SSA23 of the Rhondda Cynon Taf Local Development Plan, Policies NH1 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021, Policies 17 and 18 of Future Wales: The National Plan 204 and the relevant guidance set out in Planning Policy Wales.

11. Except for pre-construction site investigations, no development shall commence until a Construction Transport Management Plan (CTMP) has been submitted to and approved in writing by the relevant Local Planning Authority. The approved CTMP shall be adhered to throughout the construction period and shall provide for and include:

    - Site entrance roads to be well maintained and monitored during the operational life of the development. Regular maintenance shall be undertaken to keep the Site access track drainage systems to be fully operational and to ensure there are no run-off issues onto the public road network;
    - A site speed limit of 15 mph will be in place at all times to reduce the risk of faunal collisions with construction vehicles;
    - A path management plan;
    - A staff travel plan;
    - Traffic management strategy for the site access junctions with the public road network; and
    - Public Rights of Way management.

    Reason: In the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021, and Policy AW5 of the Rhondda Cynon Taf Local Development Plan.

12. No Abnormal Indivisible Loads (AILs) deliveries shall be undertaken until:
    - 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
    - details of any improvement work required to such structures as a result of construction of the development;

    have been submitted to and approved by the relevant 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 Loads deliveries to the site.

    Reason: In the interests of highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local

Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

13. Abnormal Indivisible Loads (AIL) associated with the development shall be delivered strictly in accordance with a Transport Management Plan (TMP) agreed in writing by the relevant Local Planning Authority, in consultation with the Welsh trunk road highway authority or other relevant highway authority (as appropriate), prior to the AIL deliveries commencing. The TMP shall include:
    - 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;
    - evidence of trial runs that mimic the movement of the worst case AILs along the access route where appropriate, at the discretion of the Highway Authority;
    - number and size of AILs, including loaded dimensions and weights
    - number and composition of AIL convoys, including anticipated escort arrangements;
    - methodology for managing trunk road traffic during AIL deliveries, including identification of passing places and holding areas as necessary;
    - convoy contingency plans in the event of incidents or emergencies;
    - estimated convoy journey durations and timings along the route, including release of forecast traffic queues and timing of deliveries to site;
    - 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;
    - proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed;
    - plans for the reinstatement of any temporary works after completion of the construction phase;
    - land ownership must be clarified on all drawings showing proposed highway modifications where the works extent beyond the limit of road adoption. The developer shall be responsible for the acquisition and reinstatement of all third-party land including re-instatement of boundary features
    - proposals to liaise with all relevant stakeholders and members of the public regarding construction traffic and AIL movements;
    - consideration of the cumulative impact of other abnormal load generating schemes proposing to use all or part of the same access route.
    - the appointment and role of a transport coordinator to administer the abnormal indivisible load delivery strategy;
    - temporary traffic diversions and traffic hold points;
    - details of banksmen and escorts for abnormal loads;
    - management and maintenance of layover areas, junctions, passing places and public rights of way and welfare facilities while AIL deliveries take place; and
    - details of temporary signage.

    AILs associated with the maintenance and decommissioning of the development shall enter and leave the site strictly in accordance the TMP.

    Reason: In the interests of highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local

Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

14. 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 (if needed/requested) and on completion of the construction phase of the development. The survey reports shall be submitted to and approved by the relevant Local Planning Authority, in consultation with the Welsh trunk road highway authority or other relevant highway authority (as appropriate), within 28 days of the surveys. The condition survey shall include details of how damage, caused as a result of construction traffic to highway infrastructure, shall be remediated at the expense of the developer.

    Reason: In the interests of highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

15. Prior to the Abnormal Indivisible Loads deliveries commencing, 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 relevant Local Planning Authority, in consultation with the 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 highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

16. No Abnormal Indivisible Loads (AIL) deliveries shall be undertaken until full details of any highway works associated with the construction of layover areas, passing places and highway improvements as agreed with each relevant highway authority including:

    - the detailed design of any works;
    - geometric layout;
    - construction methods;
    - drainage, and
    - street lighting, only where existing lighting is affected.

    have been submitted to and approved in writing by the relevant Local Planning Authority following consultation with the 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 highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

17. No development shall commence where the site access meets the public road network until details of the means of access to include permanent surfacing for the first 20m off the public highway and timing of works have been submitted to and approved in writing by the relevant Local Planning Authority. The works shall be carried out in accordance with the approved details.

    Reason: In the interests of highway safety and to ensure safe and satisfactory delivery of all components in accordance with Policy AW5 of the Rhondda Cynon Taf Local Development Plan; in the interests of highway safety in accordance with Policy CW3 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

18. Except for pre-construction site investigations no works are to commence on site until a Habitat Management Plan (HMP), in accordance with the Appendix 8.7 of the ES, has been submitted to and approved by the relevant Local Planning Authority, in consultation with NRW, for written approval. The plan shall include:
    - The purpose, aims and objectives of the scheme.
    - A review of the site's ecological potential and constraints.
    - Description of the plans target habitat and species features to be restored.
    - Selection of appropriate strategies for achieving beneficial habitat management and restoration.
    - Selection of specific habitat management and restoration techniques and practices for re-establishing vegetation.
    - Sources of habitat material.
    - Method statement for restoration of vegetation.
    - Extent and location of proposed works.
    - Aftercare and long-term management, including for specific measures in the appended Species Protection Plan for dormouse and water vole.
    - Personnel responsible for works.
    - Timing of works.
    - Monitoring.
    - Disposal of arisings.
    - Fencing off, as appropriate, watercourses in the area where water vole evidence was found to reduce cattle poaching and allow vegetation regeneration, whilst still allowing cattle/stock access to water at selected locations; and
    - Reducing grazing pressure on the adjacent marshy grassland to avoid poaching
    - Details of the HMP management committee
    - Details of a 5 yearly rolling programme of HMP review and adjustment of the HMP, to reflect the results of habitat and species monitoring.
    - Details of annual reporting of the HMP to the relevant Local Planning Authority.

    All habitat management works will be carried out in accordance with the approved details. Any amendments to the Habitat Management Plan during the operation of the development required as ongoing monitoring shall be submitted to and approved in writing by the relevant Local Planning Authority, in consultation with NRW, prior to their implementation.

    Reason: To ensure necessary environmental or ecological protection measures are agreed; and to enhance and afford protection to animal and plant species in accordance with Policies AW5 and AW8 of the Rhondda Cynon Taf Local Development Plan; and in the interests of biodiversity and natural heritage protection, the water environment and

highways in accordance with Policies CW4 and SP10 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

19. Between dusk and dawn between 1 April and 31 October each year, all turbine blades shall be 'feathered' when wind speeds are below the cut in speed of the operational turbines. This shall involve pitching the blades to 90 degrees and/ or rotating the blades parallel to the wind direction to reduce the blade rotation speeds below two revolutions per minute whilst idling.

    Reason: In the interests of biodiversity and to accord with Policy AW8 of the Rhondda Cynon Taf Local Development Plan and Policies CW4 and SP10 of the adopted Caerphilly County Borough Local Development Plan up to 2021; and to secure measures for the conservation and enhancement of biodiversity in accordance with Part 1 Section 6 of the Environment (Wales) Act 2016, Planning Policy Wales (February 2024) and TAN 5 Nature Conservation and Planning (2009).

20. Prior to any turbine being brought into operation, a Bat Mitigation and Monitoring Strategy (BMMS) shall be submitted to and approved in writing by the relevant Local Planning Authority, in consultation with NRW. The BMMS shall build upon the outline principles set out in ES Chapter 8 and accord with the joint agency guidance 'Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation' (Nature Scot et al, August 2021).

    The Bat Mitigation and Monitoring Strategy shall set out the details of the operational bat monitoring strategy and turbine curtailment strategy from the outset of the operation of the scheme, and shall include the following:

    a. Operational bat monitoring strategy:

        i. Bat activity acoustic monitoring methods including static detector location, timing, duration, and equipment to be used;
        ii. Methodology for searching for injured bats and bat carcasses;
        iii. Timing and duration of monitoring;
        iv. Appropriate persons responsible for implementing the monitoring;
        v. Timing and format for presenting and dissemination of monitoring results including submission to all data relevant stakeholders and ecological records databases;
        vi. Remedial measures to reduce any impacts of the scheme identified through monitoring, including in respect of turbine curtailment in (b) below.

    b. Turbine curtailment strategy:

        i. The times of day and year within the bat activity season, and the weather conditions (e.g. temperature and wind speed) when curtailment will restrict turbine operation;
        ii. The turbines for which curtailment shall apply, including their locations;
        iii. Confirmation as to how the required curtailment shall be implemented (e.g. use of SMART technologies).

    The BMMS shall be implemented in accordance with the approved details upon commencement of operation of one or more of the turbines, with a written report of the effectiveness of the BMMS provided to the LPA every 5 years of the operational phase, and any arising revisions of the plan to be agreed in writing with the relevant Local Planning Authority prior to implementation.

Reason: In the interests of biodiversity and to accord with Policy AW8 of the Rhondda Cynon Taf Local Development Plan and Policies CW4 and SP10 of the adopted Caerphilly County Borough Local Development Plan up to 2021; and to secure measures for the conservation and enhancement of biodiversity in accordance with Part 1 Section 6 of the Environment (Wales) Act 2016, Planning Policy Wales (February 2024) and TAN 5 Nature Conservation and Planning (2009).

21. Prior to any turbine being brought into operation a detailed scheme for the post-construction monitoring of golden plover at risk of collision, shall be submitted to and approved in writing by the relevant Local Planning Authority. The scheme shall include:

    i. Methods for data gathering and analysis; this should include methods for survey and carcass monitoring;
    ii. Location of monitoring (vantage point locations);
    iii. Timing and duration of monitoring;
    iv. Appropriately qualified persons and equipment to carry out monitoring;
    v. Timing and format for presenting and dissemination of monitoring results including submission to all data relevant databases;
    vi. Remedial measures to reduce any impacts identified through monitoring; and
    vii. Contingency prescriptions that will be carried out in the event of failure to undertake required surveillance.

    Reason: In the interests of biodiversity and to accord with Policy AW8 of the Rhondda Cynon Taf Local Development Plan and Policies CW4 and SP10 of the adopted Caerphilly County Borough Local Development Plan up to 2021; and to secure measures for the conservation and enhancement of biodiversity in accordance with Part 1 Section 6 of the Environment (Wales) Act 2016, Planning Policy Wales (February 2024) and TAN 5 Nature Conservation and Planning (2009).

22. Except for pre-construction site investigations, no development shall commence until a Borrow Pit Restoration Plan, incorporating details of the phased reinstatement, restoration and aftercare of the borrow pits to be undertaken at specified timings during the construction period, including topographic surveys of pre-construction profiles and details of topographical surveys to be undertaken of the restored borrow pit profiles, has been submitted to, and approved in writing by, the relevant Local Planning Authority. The full Borrow Pit Restoration Plan will align with the aims and objectives within the submitted Outline Approach to Borrow Pit Restoration – Explanation of Measures (December 2023) set out in Outline Peat Management Plan. The approved Borrow Pit Restoration Plan shall thereafter be implemented in full.

    Reason: In the interests of biodiversity in accordance with Policy CW5 of Caerphilly County Borough Local Development Plan up to 2021.

23. Should any contaminated material be observed during construction which has not been previously identified, then construction works shall cease, and the relevant Local Planning Authority immediately informed. If deemed necessary by the relevant Local Planning Authority, construction works at the site or part(s) of the site, shall not recommence until a Remediation Method Statement detailing how the unforeseen contamination is to be dealt with, has been submitted to and approved in writing by the relevant Local Planning Authority (including any additional requirements that it may specify).

The Remediation Method Statement, if required, shall include a desk study, site investigation and risk assessment to determine the nature and extent of the contamination which shall be undertaken in accordance with methodologies which have been first submitted to and approved in writing by the relevant Local Planning Authority. The results of the desk study, site investigation and risk assessment, shall be reported in the Remediation Method Statement and shall specify the measures to be taken to remediate the site, which may include measures to protect surface and ground water interests, to render it suitable for the development.
The approved Remediation Method Statement shall be implemented in full prior to development recommencing.

Reason: In the interests of health and safety and environmental amenity and so as to accord with Policy AW10 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

24. Except for pre-construction site investigations no works development shall commence until a plan for the protection of water quality and quantity of watercourses, including private water supplies, and groundwaters beneath the site has been submitted to and approved in writing by the relevant Local Planning Authority, in consultation with NRW. The water quality monitoring plan shall be informed by pre-commencement site investigations and include:
    - Timetable for monitoring
    - Details of the monitoring methods
    - Timescales for construction
    - Timescales for submission of monitoring and interpretative reports to the LPA during construction
    - Details of triggers for specific action and any necessary contingency actions, for example the need to stop work, introduction of drip trays, make use of spill kits and shut-off valves
    - Mitigation of any effects on private water supplies

    The water quality monitoring plan shall be implemented as approved.

    Reason: A construction water quality and quantity monitoring plan should be submitted to ensure necessary monitoring measures are approved prior to commencement of development or phase of development and implemented to manage any potential adverse impacts of construction and post construction on water quality and quantity in private water supplies, waterbodies, watercourses and/or groundwater and in accordance with Policy CW5 of the adopted Caerphilly County Borough Local Development Plan up to 2021, and Policy AW10 of the Rhondda Cynon Taf Local Development Plan.

25. Except for pre-construction site investigations no works development shall take place below the water table until a Hydrogeological Impact Appraisal has been submitted and agreed in writing with the relevant Local Planning Authority. All excavations below the water table shall be in accordance with the approved Hydrogeological Impact Appraisal.

    Reason: To prevent degradation of groundwater resource at the application site and in accordance with Policy CW5 of the adopted Caerphilly County Borough Local Development Plan up to 2021, and Policy AW10 of the Rhondda Cynon Taf Local Development Plan

26. Except for pre-construction site investigations, no construction of foundations shall commence until a site investigation in respect of land stability at foundation locations has been carried out in accordance with a methodology to be first submitted to and approved in writing by the relevant Local Planning Authority.

    If any land instability issues are found during site investigation, a report shall be prepared setting out the remedial measures to be undertaken on the site to render it suitable for development prior to commencement of development. The report shall be submitted to and approved in writing by the relevant Local Planning Authority and implemented in full prior to commencement of development.

    Reason: In the interests of health and safety and environmental amenity and so as to accord with Policy AW10 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

27. Prior to any turbine being brought into operation a Shadow Flicker Mitigation scheme shall have first been submitted to and approved in writing by the relevant Local Planning Authority. The Shadow Flicker Mitigation scheme shall contain:
    - The shadow flicker module(s) to be used and its function along with confirmation that the chosen module(s) has the ability to controls all turbines
    - The procedure for mitigation when shadow flicker exists.
    - The final proposed positions of the turbines.
    - The contact details of person(s) responsible for investigating complaints of shadow flicker, including a robust complaints procedure.

    Within two months of a written request from the relevant Local Planning Authority, following a complaint alleging shadow flicker from an occupant of a dwelling which lawfully existed or had planning permission at the date of this permission, the wind farm operator shall, at its expense, commission and submit a report to the relevant Local Planning Authority assessing the reported shadow flicker event(s). Where the relevant Local Planning Authority, after having reviewed the report submitted to it, confirms in writing that the incident of shadow flicker is affecting the living conditions of the resident(s), the wind farm operator shall, within 21 days, submit for approval a scheme of mitigation to the Local Planning Authority. The scheme shall be designed to mitigate the event of shadow flicker at that property and to prevent its future recurrence and shall specify timescales for implementation. The scheme shall be implemented as approved.

    The approved Shadow Flicker Mitigation scheme shall be maintained in operation for the duration of the operational life of the turbines hereby approved.

    Reason: To ensure that shadow flicker is adequately mitigated in the interests of the amenity of surrounding residents and the amenity of the area in accordance with Policies CW2 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021, and Policies AW10 and AW13 of the adopted Rhondda Cynon Taf Local Development Plan.

28. Prior to development, a scheme and programme of investigation of any interference to television signals caused by the operation of the development and for the remediation of such interference by the operation of the development shall be submitted to the relevant

Local Planning Authority for approval in writing. The scheme and programme shall include details of timescales for its implementation. The scheme and programme of investigation shall be implemented as approved.

Reason: To ensure that interference to any television signals is adequately mitigated in the interests of the amenity of surrounding residents and the amenity of the area in accordance with Policies CW2 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021, and Policies AW10 and AW13 of the adopted Rhondda Cynon Taf Local Development Plan.

29. No blades shall be erected on any turbine unless and until a scheme for the mitigation of the anticipated impacts of the operation of wind turbines on the operation of Cardiff Airport Primary Surveillance Radar ('the radar mitigation scheme'), which is required due to a direct line of sight between the radar and proposed turbines, has been submitted to and approved in writing by the Local Planning Authority in consultation with Cardiff International Airport Limited. Thereafter the development shall be operated in accordance with the radar mitigation scheme either (i) for the life of the development; or (ii) until an alternative agreement has been reached between the developer and Cardiff International Airport Limited, or their successor in title.

    Reason: In order that any impact from the proposed development on civil aviation is appropriately mitigated in accordance with Policy AW10 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

30. No blades on turbines 5, 10 and 11 shall be attached unless and until:

    a. A scheme for the remediation of all impacts of Turbines 5, 10 or 11 (as indicated on figure 4.1) on radio broadcast links ("RBL Links") which has involved consultation with Arqiva and any other RBL Links operator ("the RBL Links Operator") has been submitted to and approved in writing by the Local Planning Authority, in consultation with the RBL Links Operator ('the Approved RBL Remediation Scheme'), including measures to avoid or fully mitigate impacts and/or reasonably compensate Arqiva and any other RBL links operator ("Remedial Measures"); and

    b. The Remedial Measures detailed within the Approved RBL Remediation Scheme have been implemented for a period of 1 month, and a report detailing the results, including consultation with Arqiva and any other RBL links operator, has been submitted to and approved in writing by the Local Planning Authority. If the report indicates that there is a need for further required Remedial Measures to the extent there is any residual material interference with RBL Links, such reasonable Remedial Measures shall be implemented. These remedial measures, their costs and associated timings must be defined in the Approved RBL Remediation Scheme.

    The development shall thereafter be operated in accordance with the Approved RBL Remediation Scheme and any further Required Remedial Measures throughout the operational life of the development.

    Reason: In order to preserve RBL Broadcast Linkages in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021 and Policy AW10 of the adopted Rhondda Cynon Taf Local Development Plan.

31. The developer will provide and agree a Crane Operation Scheme, or other form of mitigation in consultation with Arqiva, to establish a way of managing and/or mitigating any impact. The Crane Operation Scheme shall be submitted to and approved in writing by the relevant Local Planning Authority in advance of installation works at T1, T2, T3, T5, T10 and T11 according to the Approved Plans.

    Reason: In order to preserve RBL Broadcast Linkages in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021 and Policy AW10 of the adopted Rhondda Cynon Taf Local Development Plan.

32. The development shall include the submitted aviation safety lighting scheme which was sent to the Civil Aviation Authority on 9th September 2022 and confirmed as being acceptable by the Ministry of Defence (MOD). Any changes to the submitted aviation safety lighting scheme must be submitted to and approved by the Local Planning Authority, in consultation with the MOD before turbine operation commences. The lighting scheme shall be maintained and retained for the lifetime of the turbines.

    Reason: In order that any impact from the proposed development on military or civil aviation is appropriately mitigated in accordance with policy AW10 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021

33. No turbines or associated structures shall be installed until details of the appearance of the turbines and associated structures have been submitted to and agreed in writing by the relevant Local Planning Authority. Development shall be carried out in accordance with the approved details.

    Reason: To minimise the environmental and visual impacts of the development, in accordance with Policies AW5, AW6, AW7, AW12, AW13 and SSA23 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policies NH1 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

34. All wind turbines shall be of a 3 bladed configuration, shall not exceed an overall height of 200m to the tips of the turbine blades, and shall rotate in the same direction. The turbines shall not display any prominent name, logo, symbol, sign or advertisement on any external surface except for health and safety signage, or other site signage as required under relevant design standards, rules or regulations. The turbines shall not be illuminated (other than for aviation safety reasons), and there shall be no permanent illumination on the site.

    Reason: To minimise the environmental and visual impacts of the development, in accordance with Policies AW5, AW6, AW7, AW12, AW13 and SSA23 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policies NH1 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

35. All electricity and control cables within the site and which are part of the development shall be laid underground.

    Reason: To minimise the environmental and visual impacts of the development, in accordance with Policies AW5, AW6, AW7, AW12, AW13 and SSA23 of the Rhondda

Cynon Taf Local Development Plan and in accordance with Policies NH1, NH3 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

36. In the event that any turbine does not function (i.e. does not supply electricity to the electricity grid network) for a continuous period of 12 months and if so instructed by the relevant Local Planning Authority, the turbine and its associated ancillary equipment shall be dismantled and its base removed to a depth of 1 metre below ground level, and removed from site within 6 months, unless otherwise agreed in writing by the relevant Local Planning Authority.

    Reason: In the interests of visual amenity and to ensure that the turbines: are not obsolete, produce electricity whilst in-situ and are removed from the site if they cease to function, in accordance with Policies AW5, AW6, AW7, AW12, AW13 and SSA23 of the Rhondda Cynon Taf Local Development Plan and in accordance with Policies NH1 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021

37. No blades shall be erected on turbine 7 (as shown on ES Figure 4.1a: Infrastructure Layout) until the public right of way (GELI/BWY117E/1) affected by the oversail from turbine 7 has been diverted.

    Reason: In order to protect users of the Public Right of Way in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021

38. Prior to the commencement of any works (including those associated with the installation of electrical cables) within the vicinity of trees identified in the Arboricultural Assessment within Appendix 6 of the Regulation 15(2) response (November 2023) full details of the tree protection measures for all trees and hedges to be retained shall be submitted to and approved in writing by the relevant Local Planning Authority. These measures shall be set out in a detailed Arboricultural Method Statement to include the appointment of a project Arboriculturalist and the specification of their role in the project, the specification of the location and type of protective fencing, the timings for the erection and removal of the protective fencing, the details of any hard surfacing and underground services proposed within the root protection areas, all to be in accordance with the British Standard for Trees in Relation to Construction 5837: 2012, bespoke root protection areas for ancient trees and woodland, the monitoring of tree protection measures during construction and mitigation measures for any trees lost during construction. All tree protective measures shall be carried out as set out in the approved Arboricultural Method Statement.

    Reason: In the interests of natural heritage protection in accordance with Policies CW4 and CW6 of the adopted Caerphilly County Borough Local Development Plan up to 2021 and Policy AW7 of Rhondda Cynon Taf Local Development Plan

39. No development 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 turbines and associated infrastructure of up to 50m in any direction subject to the minimisation of impacts on environmental constraints. The protocol shall accord with the joint agency guidance on ‘Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation’ (Nature Scot et al, August 2021) and in particular paragraph 7.1.2 thereof. The protocol shall be implemented as approved.

Reason: To define the approved location of the turbines in accordance with Policies AW5, AW6, AW7, AW12, AW13 and SSA23 of the Rhondda Cynon Taf Local Development Plan and Policies CW4, NH1 and SP6 of the adopted Caerphilly County Borough Local Development Plan up to 2021

40. Prior to the end of the third year after the first export date, a scheme for the enhancement of routes across the site to improve access and recreation including details of implementation and a timetable for completion, shall be submitted to and approved in writing by the relevant Local Planning Authority. The scheme shall be implemented as approved.
Reason: To improve countryside access in accordance with Policy CW1 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

41. Within 21 days of a written request from the relevant Local Planning Authority, following a complaint to it from a resident alleging noise disturbance at the dwelling at which they reside and where Excess Amplitude Modulation (AM) is considered by the Local Planning Authority to be present in the noise immissions at the complainant's property, the wind farm operator shall submit a scheme to be approved in writing by the relevant Local Planning Authority, providing for the further investigation and, as necessary, control of Excess AM. The scheme shall be based on best available techniques and shall be implemented as approved**.**

Excess AM is defined as AM with a rating level of 3 dB or greater as assessed in accordance with the Institute of Acoustics, IOA Noise Working Group (Wind Turbine Noise) Amplitude Modulation Working Group Final Report A Method for Rating Amplitude Modulation in Wind Turbine Noise 9 Aug 2016 Version 1, or any relevant guidance superseding it.

Reason: To protect the amenities of local residents in accordance with Policies AW5 and AW10 of the Rhondda Cynon Taf Local Development Plan; and to protect the amenities of local residents in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

42. The rating level of noise immissions from the combined effects of the wind turbines hereby permitted (the wind farm) (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes, shall not exceed the values for the relevant integer wind speeds set out in Table 1 and Table 2 (attached to these conditions). Noise limits for dwellings which lawfully exist or have planning permission for construction at the date of this consent but are not listed in Table 3 shall be those of the physically closest location listed in Table 3 unless otherwise agreed in writing by the relevant Local Planning Authority. The coordinate locations to be used in determining the location of each of the dwellings listed in Table 1 and Table 2 shall be those listed in Table 3 which identifies the relevant limit for each listed dwelling

    a. Within 21 days from receipt of a written request from the relevant Local Planning Authority, following a complaint from the occupant of a dwelling which lawfully existed or had planning permission at the date of this consent alleging noise disturbance at that dwelling from the wind farm hereby approved, the wind farm operator of the

development hereby approved shall, at its expense, employ an independent consultant approved by the relevant Local Planning Authority to assess the level of noise immissions from the turbines of the hereby approved wind farm at the complainant's property following 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.

b. Within 14 days of approval by the relevant Local Planning Authority of the appointed independent consultant, an assessment protocol shall be submitted to and approved in writing by the relevant 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, the applied noise limit, 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 relevant Local Planning Authority under Condition 39 b., and such others as the independent consultant considers likely to result in a breach of the noise limits. The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol approved by the relevant Local Planning Authority.

c. The wind farm operator shall provide to the relevant Local Planning Authority the independent consultant's assessment and conclusions of the rating level of noise immissions undertaken, including all calculations, audio recordings and the raw data upon which those assessments and conclusions are based. The data shall be presented in a format that can be independently verified by the relevant Local Planning Authority and demonstrates compliance with Table 1 and Table 2. Such information shall be provided within 2 calendar months of the date of the written request from the relevant Local Planning Authority, unless otherwise extended in writing by the relevant Local Planning Authority.

d. Where, following receipt of the independent consultant's noise assessment, the relevant Local Planning Authority is satisfied of an established breach of the noise limits set out in the attached Table 1 and Table 2, the wind farm operator shall within 21 days of written notification by the Local Planning Authority, submit a scheme of mitigation for approval. The scheme of mitigation shall include measures to mitigate the breach, measures to prevent its future recurrence and a timetable for implementation. The scheme shall be implemented as approved and shall be retained thereafter unless otherwise agreed in writing by the relevant Local Planning Authority.

e. Information relating to the wind conditions and operation of the turbines shall be provided to the relevant Local Planning Authority within 28 days of any such request and shall be in a format that will allow the relevant Local Planning Authority to enable checks to be undertaken to verify compliance with Table 1 and Table 2 and in accordance with the attached Guidance Notes. Such data shall be retained for a period of not less than 24 months.

f. No development shall commence until details of a nominated representative for the development to act as a point of contact for local residents (in connection with this Condition), together with the arrangements for notifying and approving any subsequent change in the nominated representative, have been submitted to and approved in writing by the relevant Local Planning Authority. The nominated representative shall have responsibility for liaison with the relevant Local Planning Authority in connection with any noise complaints made during the construction, operation and decommissioning of the wind farm.

Noise limit tables

Table 1 - Noise limits; daytime hours 07:00-23:00 (dB LA90, 10-min)

Location	Standardised 10 m Height Wind Speed (m/s)								
	4	5	6	7	8	9	10	11	12
10 Brynderwen	46.7	47.5	48.4	49.2	49.8	50.3	50.3	50.3	50.3
Bryn Tail	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Cwmheldeg Isaf Farm	38.0	38.7	40.1	40.9	41.1	41.1	41.1	41.1	41.1
172 Caerphilly Road	38.0	38.0	38.0	38.0	39.1	40.9	40.9	40.9	40.9
Parc Mawr	38.0	38.0	38.0	38.0	40.9	46.4	46.4	46.4	46.4
Coedcaecorrwg	38.0	38.0	38.0	38.6	40.9	40.9	40.9	40.9	40.9
Fydygelyn	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Craig yr Hufren	38.0	38.0	38.0	38.2	38.2	38.2	38.2	38.2	38.2
38 Graig Terrace	38.0	38.0	38.0	38.2	40.1	41.5	41.5	41.5	41.5
97 Caerphilly Road	38.0	38.0	38.0	38.6	40.6	42.9	42.9	42.9	42.9
Pen-yr-Heol-Fawr	38.0	39.5	41.3	42.1	42.1	42.1	42.1	42.1	42.1
Cefn Llwyd	38.0	38.0	38.2	41.0	41.0	41.0	41.0	41.0	41.0
Castell Llwyd	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Llanbradach Fawr	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Pen-yr-Heol-Las	38.0	38.0	38.7	42.2	42.2	42.2	42.2	42.2	42.2
35 Ashgrove	38.5	39.1	40.1	41.7	41.7	41.7	41.7	41.7	41.7
The Barn House	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Graddfa	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Y Berllan	50.9	51.0	51.2	51.4	51.5	51.5	51.5	51.5	51.5
Glawnant (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Pen-yr-Heol-Fawr (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0

Cefn Llwyd (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Twyn-yr-Harris (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Llanbradach Fawr (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Cenydd Terrace	40.0	40.0	40.0	40.0	40.1	41.5	41.5	41.5	41.5
Woodland Terrace	40.0	40.0	40.0	40.0	40.1	41.5	41.5	41.5	41.5
Alexandra Terrace	40.0	40.0	40.0	40.0	40.1	41.5	41.5	41.5	41.5
Foel Ddu	40.0	40.0	40.0	40.0	40.9	46.4	46.4	46.4	46.4

Table 2 – Noise limits; night hours 23:00-07:00 (dB LA90, 10-min)

Location	Standardised 10 m Height Wind Speed (m/s)								
	4	5	6	7	8	9	10	11	12
10 Brynderwen	43.0	43.0	43.0	43.2	44.5	46.0	46.0	46.0	46.0
Bryn Tail	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Cwmheldeg Isaf Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
172 Caerphilly Road	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Parc Mawr	43.0	43.0	43.0	43.0	43.0	43.0	50.0	50.0	50.0
Coedcaecorrwg	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Fydygelyn	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Craig yr Hufren	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
38 Graig Terrace	43.0	43.0	43.0	43.0	43.0	43.0	43.4	43.4	43.4
97 Caerphilly Road	43.0	43.0	43.0	43.0	43.0	43.0	45.3	45.3	45.3
Pen-yr-Heol-Fawr	43.0	43.0	43.0	43.0	46.4	46.4	46.4	46.4	46.4
Cefn Llwyd	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Castell Llwyd	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Llanbradach Fawr	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Pen-yr-Heol-Las	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
35 Ashgrove	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
The Barn House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Graddfa	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Y Berllan	43.0	43.0	43.0	43.0	43.0	43.8	47.5	47.5	47.5
Glawnant (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Pen-yr-Heol-Fawr (FI)	45.0	45.0	45.0	45.0	46.4	46.4	46.4	46.4	46.4
Cefn Llwyd (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0

Location	Standardised 10 m Height Wind Speed (m/s)								
	4	5	6	7	8	9	10	11	12
Twyn-yr-Harris (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Llanbradach Fawr (FI)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0

Table 3 - Dwellings and limit locations

Location	Easting	Northing	Limit Location
Parc Newydd	310969	190723	Parc Mawr
Parc Mawr	310977	191119	Parc Mawr
Grove Terrace	311223	191048	38 Graig Terrace
Senghenydd Building	311342	191358	38 Graig Terrace
Craig-yr-Hufen	311080	191742	Craig yr Hufen
Glawnant (FI)	311746	191905	Glawnant (FI)
Cenydd Terrace	311604	191639	Cenydd Terrace
Woodland Terrace	311600	191429	Woodland Terrace
Alexandra Terrace	311707	191302	Alexandra Terrace
Upper Brynhyfryd Terrace	311699	191131	38 Graig Terrace
Clive Street	311782	190802	97 Caerphilly Road
Gelli-fanadlog	312171	190286	38 Graig Terrace
Building	312612	190155	Cefn Llwyd
Cae'r-llwyn Farm	312766	190286	Cefn Llwyd
Cefn Llwyd (FI)	312628	190814	Cefn Llwyd (FI)
Ysgol Ifor Bach	311762	189766	172 Caerphilly Road
T'yn y Parc	311877	189897	172 Caerphilly Road
Garth	311199	189615	Parc Mawr
Building	311072	189115	Parc Mawr
Aberfawr Farm	310707	189163	Parc Mawr
Coed Caecorrwg	310369	189972	Coedcaecorrwg
Foel Ddu	310802	190770	Foel Ddu
Ty Cae Mawr Farm	309977	189289	Parc Mawr
Ffynnon Rhyngyll Farm	310107	189229	Parc Mawr
Craig-fach	309087	189529	Bryn Tail
Hendre-prosser	309302	189574	Bryn Tail
Bryn Tail	309382	189859	Bryn Tail
William Price Close	308772	189529	Bryn Tail

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Location	Easting	Northing	Limit Location
Craig-yr-Helfa Cottages	308555	189852	Bryn Tail
Pen-coed	308606	190423	Bryn Tail
Hilltop Crescent	308273	190510	10 Brynderwen
Pencoed Avenue	308285	190264	10 Brynderwen
Pont Sion	308405	190923	10 Brynderwen
Cynon View	308921	191487	Bryn Tail
Heol Mynydd	309107	191749	Bryn Tail
Oakland Terrace	308833	191852	Bryn Tail
Cilfynydd	308988	192157	Bryn Tail
Pant-du Farm	309808	192711	Cwmheldeg Isaf Farm
Cwmheldeg Isaf	310095	192836	Cwmheldeg Isaf Farm
Building	310242	192808	Fydygelyn
Fydygelyn	310747	193080	Fydygelyn
Fydygelyn	310657	193085	Fydygelyn
Building	310957	193386	Fydygelyn
Cwm Bach	310937	193526	Fydygelyn
Tai'r-waun	310207	193366	Fydygelyn
Lili Wen Farm	310357	193496	Fydygelyn
Llanfabon Inn	310827	193761	Fydygelyn
Pengelli	311015	193798	Fydygelyn
Pengelli II	311085	193823	Fydygelyn
Gellihir	311705	194338	Fydygelyn
Pen-yr-Heol-Fawr (FI)	312495	193778	Pen-yr-heol Fawr (FI)
Heol Fawr Road	312305	194353	Fydygelyn
Castel Llwydd Farm	313395	193803	Castell Llwyd
Twyn-yr-Harris (FI)	313555	193413	Twyn-yr-Harris (FI)
Twyn Road Dwellings	313950	193388	Castell Llwyd
Coedcace Mawr	313830	193648	Castell Llwyd
Llanbradach Fawr (FI)	313655	192543	Llanbradach Fawr (FI)
Tir Twyn Farm	313685	193973	Castell Llwyd
Heol Brynteg	314030	193548	Castell Llwyd
Mill Lane	314425	192798	Graddfa
Graddfa	314640	192017	Graddfa
Llanbradach Isaf	314540	191317	The Barn House
Colliery Road Dwellings	314850	191377	Graddfa

Location	Easting	Northing	Limit Location
Victoria Street	315045	191312	Graddfa
Wingfield Crescent	315055	190962	Graddfa
Llanbradach I	314665	190567	Graddfa
Llanbradach II	314620	190407	Graddfa
Pencerrig Street	314730	190427	Graddfa
Ty'n y Graig	314850	190547	Graddfa
Station Road	314720	190217	Graddfa
High Street	314985	190442	Graddfa
Coed-y-Brain Cresent	314700	189767	Graddfa
Pen-yr-Heol Las Farm	314095	189697	Pen-yr-Heol-Las
Cwarrau-mawr	314050	189202	Pen-yr-Heol-Las
Cwm Ifor Farm	313615	189347	Pen-yr-Heol-Las
Ffordd Las	312475	189677	172 Caerphilly Road
St Annes Gardens	312640	189417	172 Caerphilly Road
Ty-draw	311559	193383	Fydygelyn
Bryn-du	311605	193958	Pen-yr-Heol-Fawr

Reason: To protect the amenities of local residents in accordance with Policies AW5 and AW10 of the Rhondda Cynon Taf Local Development Plan; and to protect the amenities of local residents in accordance with Policy CW2 of the adopted Caerphilly County Borough Local Development Plan up to 2021.

Guidance Notes to the Noise Condition

These notes are to be read with and form part of the noise conditions. 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 $l_{a90,10\text{-minute}}$ 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 standard thereof). Measurements shall be undertaken in such a manner

to enable a tonal penalty to be applied in accordance with guidance note 3. These measurements shall be made in such a way to enable a tonal penalty to be applied in accordance with guidance note 3 to satisfy that the requirements of guidance note 3 shall also be satisfied.

(b) The microphone should be mounted at 1.2 - 1.5 m above ground level, fitted with a two layer windshield (or suitable alternative approved in writing from the relevant 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 3.5m away from the building facade or any reflecting surface except the ground at a location agreed with the relevant local planning authority.

(c) The $L_{a90,10\text{-minute}}$ measurements shall be synchronised with measurements of the 10-minute arithmetic mean wind speed and with operational data logged in accordance with guidance note 1(d), including power generation information for each wind turbine, 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 relevant 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 relevant local planning authority in accordance with the noise condition shall be provided in comma separated values in electronic format with the exception of audio data which shall be supplied in the format in which it is recorded.

Guidance note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in note 2 paragraph (b). Such measurements shall provide valid data points for the range of wind speeds, wind directions, times of day and power generation requested by the local planning authority. In specifying such conditions the relevant local planning authority shall have regard to those conditions which were most likely to have 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 noise limits.

(b) Valid data points are those that remain after all periods during rainfall have been excluded. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10minute period concurrent with the measurement periods set out in note 1 (c) and is situated in the vicinity of the sound level meter.

(c) For those data points considered valid in accordance with guidance note 2(b), values of the $L_{A90,\ 10\ minute}$ 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

Where, in the opinion of the local planning authority, noise immissions at the location or locations where assessment measurements are being undertaken contain a tonal component, the following rating procedure shall be used:

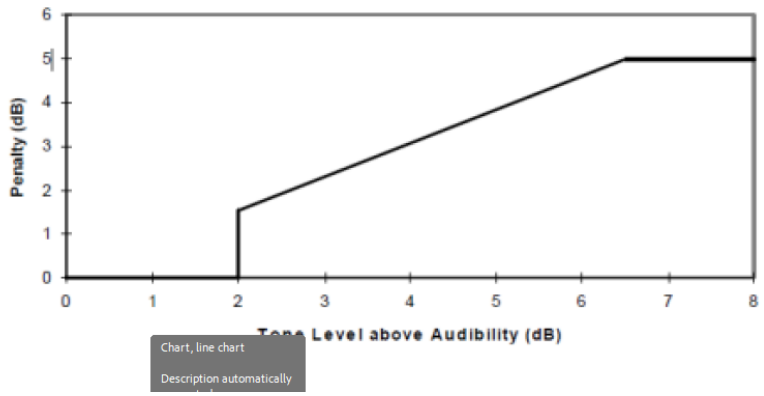
(a) For each 10-minute interval for which $L_{A90,\ 10\text{-}minute}$ data have been determined as valid in accordance with guidance note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10-minute period. The 2-minute periods should be spaced at 10-minute intervals 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.

(b) 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 104-109 of ETSU-R-97.

(c) The arithmetic average margin above audibility shall be calculated for each wind speed bin where data is available, each bin being 1 metre per second wide and centred on integer wind speeds. For samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.

(d) The tonal penalty shall be derived from the margin above audibility of the tone according to the figure below. The rating level at each wind speed shall be calculated as the arithmetic sum of the wind farm noise level, as determined from the best-fit curve described in note 2, and the penalty for tonal noise.

(e) 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 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 relevant local planning authority in its written assessment protocol.

(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 Table 1 - Noise limits; daytime hours 07:00-23:00 (dB LA90, 10-min) and Table attached to the noise conditions or the noise limits for alternative agreed complainant's dwelling, 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 immissions from the site, hereby consented, 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 reasonably requires to undertake the further assessment or any other assessment to determine compliance with Table 1 - Noise limits; daytime hours 07:00-23:00 (dB LA90, 10-min) and Table as attached. The further assessment shall be undertaken in accordance with the following steps:

i. Refining the steps in guidance note 2, with the wind farm switched off, and determining the background noise (L_3) at each integer wind speed within the range requested by the relevant local planning authority in its written request and the approved protocol.

ii. The wind farm noise (L_1) at this speed shall then be calculated as follows where L_2 is the measured level with turbines running but without the addition of any tonal penalty:

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

iii. The rating level shall be re-calculated by adding the tonal penalty (if any is applied in accordance with guidance note 3) to the derived wind farm noise L_1 at that integer wind speed.

If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note (iii) above) at any integer wind speed exceeds the values set out in Table 1 - Noise limits; daytime hours 07:00-23:00 (dB LA90, 10-min) and Table or exceeds the noise limits approved by the relevant Local Planning Authority for an alternative agreed complainant's dwelling then the development fails to comply with the conditions.

END OF CONDITIONS