

## Appeal Decision Notice

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Decision by Timothy Brian, a Reporter appointed by the Scottish Ministers

- Planning appeal reference: PPA-270-2115
- Site address: land 6km west of Findhorn Bridge, Glen Kyllachy, by Tomatin
- Appeal by RWE Innogy UK Limited against the decision by The Highland Council
- Application for planning permission 13/02441/FUL dated 28 June 2013 refused by notice dated 26 August 2014
- The development proposed: erection of wind farm (max. 50MW installed capacity) comprising 20 turbines (110m max. high to blade tip) and associated infrastructure, access tracks and 3 borrow pits (Glen Kyllachy Wind Farm)
- Application drawings: Location Plan, Site Layout Plan and Proposed Site Layout Plan: Plan Numbers 000001, 000002 and 000003
- Date of site visit by Reporter: 9-10 February 2015

Date of appeal decision: 22 April 2015

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### Decision

I allow the appeal and grant planning permission subject to the 20 conditions listed at the end of the decision notice. Attention is also drawn to the 3 advisory notes at the end of the notice.

### Reasoning

1. I am required to determine this appeal in accordance with the development plan, unless material considerations indicate otherwise. Another important consideration is Scottish Planning Policy, published in June 2014, which sets out Scottish Ministers' policy on onshore wind energy developments.

2. Having regard to the provisions of the development plan the main issue in this appeal is landscape and visual impact (including cumulative impact). Other relevant considerations include residential amenity, noise impact, natural heritage, economic/ tourism impact, cultural heritage and impact on water and drainage.

### The proposal

3. The appeal site covers an area of open moorland of over 574 hectares, 4.5 kilometres (km) west of the A9 trunk road. The village of Tomatin is 4.5km to the north east, and Farr is 5km to the north west. The application proposes two groups of wind turbines, each up to 110 metres (m) high, to the south-west and south-east of the operational Farr wind farm. The proposed Glen Kyllachy wind farm has been designed to



form a cohesive grouping with the existing, similarly sized turbines. However it would be operated independently from the Farr wind farm, and would have separate infrastructure and a separate grid connection. The application was accompanied by an environmental statement (ES).

4. None of the consultees maintained an objection to the proposal, except Findhorn District Salmon Fishery Board (see paragraph 55 below).
5. There were 35 letters in support of the application and 29 objections to the proposal. The local community councils, Strathdearn Community Council and Strathnairn Community Council, objected to the proposed development.
6. The report by the council's Head of Planning and Building Standards recommended that permission be granted subject to conditions, but the South Planning Applications Committee decided to refuse planning permission for the following reason:

The proposal contravenes Policy 67 of the Highland-wide Local Development Plan in that the development will have a significant detrimental visual impact, both taken cumulatively with Farr wind farm and on its own, at areas of regional and local significance, notably, Slochd, Strathnairn, Loch Ashie, Abriachan and consequently, the Great Glen Way.

7. At the appeal stage 67 further letters of objection were lodged, including objections from Strathdearn Against Windfarm Developments (SAWD), Save Our Strathnairn (SOS), and Strathnairn Community Council.

#### Policy context

8. The development plan for the area comprises the Highland-wide Local Development Plan (April 2012). The Plan recognises that the Highland area has great potential for renewable energy production, including onshore wind.
9. Policy 67: Renewable Energy Developments states that the council will consider the contribution of the proposal towards renewable energy targets, and any positive and negative effects on the local and national economy, amongst other factors. Subject to balancing with these considerations and taking into account any mitigation measures, the council will support proposals where it is satisfied that they are located, sited and designed such that they will not be significantly detrimental overall, either individually or cumulatively with other developments. The policy requires the consideration of any significant effects, including natural, built and cultural heritage features, species and habitats, visual impact, impact on landscape character, amenity at sensitive locations including residential properties, noise, shadow flicker, ground and surface water, public access, tourism and recreation, and traffic and transport.
10. The appeal site (with the exception of the northern access track) falls within an Area of Search for wind energy identified in the council's Interim Supplementary Guidance on Onshore Wind Energy (March 2012).
11. Scottish Planning Policy (SPP), published in June 2014, reaffirms the Scottish Government's support for the expansion of renewable energy generation capacity, including

onshore wind, and highlights the considerations to be taken into account when assessing proposed developments. Planning authorities are required to set out in the development plan a spatial framework identifying those areas that are likely to be most appropriate for onshore wind farms. The approach set out in Table 1 of SPP would place the appeal site in Group 3: Areas with potential for wind farm development.

### Landscape impact

12. The site lies within the *rolling uplands* landscape character type, which consists of large, smooth rounded hills with summits of a similar height, spaced far apart. This landscape character type is largely remote in character with few human influences and largely intact habitats. It has a medium sensitivity to wind farm development due to its large scale, its generally simple landform and vegetation cover, existing land use and the presence of Farr wind farm. The existing wind farm is a prominent element of the landscape character type, though not so dominant as to be a defining characteristic.

13. The proposed turbines would have limited visibility from within the surrounding 35km radius study area, and there are very limited areas where they would not be seen together with the existing Farr wind farm. There would be localised significant effects on landscape character within around 10km of the site, notably in Strathdearn (which has higher sensitivity to wind farm development) and on the ridgelines above the strath.

14. However the proposed wind farm would be perceived as a single development with the adjacent Farr turbines, and would only slightly increase the proportion of the view occupied by turbines seen from most of the surrounding landscape.

15. There are no national or international landscape designations within the site, but the nearest boundary of the Cairngorms National Park is approximately 4km to the south east of the proposed eastern access road. The closest Special Landscape Areas (SLAs) are at Loch Ness and Duntelchaig (5km to the west) and Drynachan, Lochindorb and Dava Moors (8km to the east).

16. The ES predicts significant effects on landscape character on the northern boundary of the national park, and the south-west boundary of the latter SLA. In particular there would be significant effects on the summit of Carn nam Bain Tighearna. However I agree with the finding in the ES that the proposed turbines would be seen in the context of, and as part of, the existing Farr wind farm, and would appear contained within the large scale surrounding landform, seen against the backdrop of the distant hills.

17. Cairngorms National Park Authority (CNPA) did not object to the proposal. Taking into account the limited extent of predicted visibility of the proposed wind farm from the majority of the national park, I agree with the authority's landscape advice (endorsed by Scottish Natural Heritage) that:

- the proposal would not impact significantly on the distinct landscape character of the national park's landscape;
- there would be no significant loss in the quality and extent of wildness that can be experienced in the national park;
- the combined Glen Kyllachy/Farr array would not adversely affect the landscape setting of the national park; and

- the cumulative effect of the proposal on landscape character and special qualities of the national park would not be significant.

18. The committee report indicated that Scottish Natural Heritage (SNH) and CNPA will have considered the cumulative impact including nearby wind farm developments at Farr, Moy, Tom na Clach, Dunmaglass and Corriegarth.

19. SNH noted that the appeal site did not lie within a Search Area for Wild Land or a Core Area for Wild Land, but that the proposal would be visible from both of these areas. SNH commented that visibility would be limited mainly to areas that already contain visibility of the Farr turbines, and agreed with the ES that impacts on the integrity of the wild land areas would not be greatly increased.

20. The ES does not predict significant effects on any Historic Gardens and Designed Landscapes within the study area.

### Visual impact

21. The visual impact of the development was assessed from 23 representative viewpoints agreed with the council and SNH. Whilst objectors have criticised the absence of a number of additional viewpoints I agree with the council that the selected viewpoints are sufficient to make an overall assessment of the potential visual impact of the project.

22. There were also criticisms of the quality of the visualisations, but I note that the landscape and visual assessment was carried out in accordance with Guidelines for Landscape and Visual Impact Assessment, which is the industry standard. The ES included a set of monochrome images to make it easier to distinguish the proposed turbines from the existing ones. I am content that the submitted visualisations provide an adequate basis to assess the landscape and visual impact of the development.

23. It has also been suggested that the proposal is an attempt to reinstate turbines which were removed from the original Farr proposal in response to concern by SNH that they would spill out of the 'bowl' formation. However the layout and elevation plan within the appellants' document APP 1.14 shows that the five turbines deleted from that scheme were to the north-west of the Farr wind farm, whereas the Glen Kyllachy turbines would be to the south-west and south-east.

24. In relation to the Glen Kyllachy proposal the ES found that there would be a significant detrimental visual impact from seven of the representative viewpoints (VPs):

- VP2 – Strathdearn, east of A9 at Ruthven
- VP3 – A9 approach to Tomatin
- VP5 – Slochd summit
- VP6 – Carn nam Bain Tighearna
- VP9 – Coignafearn Road
- VP13 – Strathdearn, west of A9
- VP15 – Garbole Road

25. Of these viewpoints, from VP2 (Strathdearn) 2 turbines within the Farr wind farm are already visible to hub height at a distance of 7.6km. The proposal would add 2 turbines to

hub height and 4 blade tips at a distance of 8.2km, which would be conspicuous from this viewpoint, but less so from other nearby locations where tree cover is available.

26. At VP3 although the ES assesses the cumulative effect as moderate for cyclists, using the National Cycle Route, I note that only a single turbine would be seen to hub height, plus 3 blades and 2 blade tips, at a distance of 5.1km, in addition to 2 blades of the Farr wind farm. I agree with the ES that the impact for motorists would not be significant.

27. The proposed wind farm would be prominent in views from VP5 (Slochd summit), from where the tops of 6 new turbines (together with blades and blade tips) would be visible at a distance of 7.5km. However, the presence of the existing Farr turbines and the short section of road affected in this way would limit the impact experienced by car drivers and cyclists from this viewpoint. Indeed the proposed turbines would be visible to northbound drivers for less than a minute.

28. I accept the conclusion of the ES that there would not be significant effects on the A9 trunk road or the Perth to Inverness railway line which runs almost parallel, from where the wind farm would be seen only for short sections. The council notes that the railway line runs through a cutting for many sections north of Slochd.

29. From Carn nam Bain Tighearna (VP6) at 633m AOD all of the proposed turbines would be seen at a distance of 9.2km, together with most of the Farr turbines, and a number of other operational and consented wind farms. However the proposed wind farm at Glen Kyllachy would occupy only a very small angle of the panoramic view from this high summit.

30. At VP9 (Coignafearn Road) on the minor road within Strathdearn a single turbine (and 2 further blade tips) would be seen only 2.75km away. Most of the wind farm would be screened by the landform from this viewpoint and elsewhere on this road to the south-east of the proposed wind farm.

31. From VP13 (Strathdearn, west of A9) two turbines would be seen at a distance of 5.2km. However views towards the proposed wind farm from this scenic strath are restricted by the terrain, the alignment of the road, and the vegetation.

32. On the basis of my site visit I agree with the finding in the officer's committee report that the overall impact from Coignafearn Road (VP9 and VP13) would be limited and intermittent.

33. There would clearly be a major visual impact from the Garbole Road (VP15) which runs past the site on its west side. Almost all the turbines would be seen, at a distance of only 1.2km to the closest turbine. However this minor road, which runs from Garbole to the settlement of Farr, already has a clear view of the Farr wind farm at close quarters, and an existing grid line. The proposal would be seen as an extension to the existing wind farm, rather than a fresh incursion into virgin moorland.

34. The council's reasons for refusal suggest that there would also be significant detrimental visual impact at Strathnairn (VP19), Loch Ashie (VP20), Abriachan (VP18) and the Great Glen Way (VP17). However that contention is not borne out by my site visits and

review of the visualisations, which support the findings of the ES and SNH that the impact in wider views would not be significant. This is largely due to the effect of distance, and because the new turbines would read as an extension to the existing cluster at Farr.

35. At VP19 (Strathnairn) there is already a clear view of the Farr wind farm and access tracks. Whilst the proposal would add 2 turbines and 4 blades to the view, it would not amount to a significant change. I appreciate that there are other locations within Strathnairn where more turbines would be visible, including sections of minor road in the vicinity of Brin Mains and north of Dunlichity, but views are likely to be screened or filtered by the extensive woodland cover on the east side of the strath.

36. I conclude that the impact of the wind farm within Strathnairn and Strathdearn would be confined and localised, and that where they were visible the turbines would tend to be seen as an extension to the Farr wind farm rather than a new intrusion in the landscape.

37. From the elevated viewpoint VP18 (Abriachan) the proposal would marginally extend the existing group of turbines at Farr on the skyline at a distance of 16km, whereas at VP17 (Great Glen Way) the turbines would be hard to detect over a distance of more than 21km. At VP20 (General Wade's Military Road near Loch Ashie, 11km from the nearest proposed turbine) there is already a clear view of the existing Farr turbines on the skyline. The appeal proposal would extend that group of turbines but to a very limited extent in relation to the panoramic view which includes Loch Ashie and the mountains surrounding Loch Ness. The proposed turbines would be barely seen from VP21 (Great Glen Way) on the outskirts of Inverness at a distance of over 17km.

38. I conclude on the basis of the three representative viewpoints at VP17, VP18 and VP21 that there would not be a significant impact on the Great Glen Way.

39. From VP1 (over 13km from the nearest turbine) the proposed Glen Kyllachy wind farm would extend the array of turbines at Farr already seen from the summit of Carn nan Tri-Tighearnan, and their impact would be modest in comparison to that of the approved wind farms at Moy and Tom nan Clach.

40. Overall I conclude that, although the proposed Glen Kyllachy wind farm would have a significant visual impact from certain viewpoints, the impact would be limited by the landform, and the turbines would tend to be seen in conjunction with the existing Farr wind farm. I also conclude that the proposal would not have a significant impact on landscape character, the special qualities of the Cairngorms National Park, other landscape designations or the Great Glen Way.

#### Cumulative impact

41. The objection on behalf of SAWD and SOS argued that additional supporting documentation should have been lodged at the appeal stage to take account of the changed cumulative position, including tree removal, various wind farm proposals and a proposed 275kV overhead power line. However I note that the Zone of Theoretical Visibility (ZTV) and wirelines within the ES enable an assessment of visibility on a bareground basis.

42. SPP requires the consideration of the cumulative impact of existing and consented energy development, rather than potential schemes including those at the scoping stage. I am satisfied that all the relevant schemes have been taken into account in this case.

43. The objectors point out that the 20 turbines proposed at Glen Kyllachy would represent a 50% increase in the 40 turbines at Farr, and argue that the local area already hosts enough turbine development. They point out that 33 turbines are under construction at Dunmaglass wind farm, and a further 20 turbines are being built at Moy on the border with Strathnairn.

44. I acknowledge that the area already accommodates a large number of turbines, but the current proposal should be assessed on its own merits, which requires the assessment of impacts, including cumulative impact. I have already found that the landscape and visual impact of the proposal is limited, as result of the topography and visual integration with the existing Farr wind farm. This is illustrated by the ZTV, and by the visualisations which show that the only significant cumulative impact would be in combination with the turbines at Farr when seen from certain viewpoints described above.

45. I conclude that the cumulative impact of this scheme would not be as pronounced as the objectors fear, for the reasons I have already given above.

#### Residential amenity

46. No significant effects are predicted on the main settlements, towns or villages in the study area. There are no residential properties within 2.5km of the proposed turbines, where there would be the potential for significant impacts. The nearest property with predicted visibility of the wind farm is 2.7km from the nearest turbine. Most of the closest properties in Strathdearn and Strathnairn are over 4km away.

47. On the basis of the representative viewpoints discussed above (VP2, VP9 and VP13) I conclude that overall there would not be a significant impact on residential amenity.

#### Noise impact

48. As part of the ES an assessment was made of the potential construction and operational noise of the proposed development, which took account of existing and permitted houses in the vicinity. I note that the council's Environmental Health Officer raised no objection to the application, having regard to the predicted noise (including cumulative noise) levels. However because the predicted noise levels at two properties would be close to accepted noise limits, a condition has been devised which would ensure compliance monitoring and mitigation measures. This condition, which has been agreed between the appellants and the council, would ensure that cumulative noise levels arising from the existing Farr wind farm and the proposed Glen Kyllachy wind farm would meet the appropriate limits set out in ETSU-R-97: The Assessment and Rating of Noise from Wind Farms.

#### Natural heritage

49. There are no nature conservation designations affecting the site, and SNH has accepted the finding in the ES (which assessed the development on its own and in combination with other wind farms in the area) that the development is unlikely to impact on any nearby designated sites. However the site is likely to be used by a number of

European and nationally protected species including otter, bats, wild cat, water vole, pine martin, golden plover, dunlin, curlew, black grouse, merlin, red kite, golden eagle and peregrine falcon.

50. SNH has therefore proposed a number of conditions, including the need for pre-construction surveys, the production of a habitat management plan, a deer management plan, and a construction and environmental management plan (CEMP), and an allowance for micro-siting to avoid areas of montane heath. Subject to these mitigation measures there is no nature conservation objection to the proposal.

#### Economic/tourism impact

51. The proposed development would provide a modest boost to the local economy. The ES indicates that the project would create 6 full time equivalent jobs during the 25 years that the wind farm would be in operation, and 100 jobs during the construction phase. The development represents an investment of some £12 million.

52. There is little evidence that the proposal would have an adverse impact on local recreation or tourism, especially having regard to the low level of use of the site by walkers, hill runners and skiers noted by the council's Access Officer, and the acceptance in the officer's committee report that there would be a limited impact on key tourist assets. Cycle routes and core paths in the area would be unaffected, and there would be scope for horse riders to use the access tracks within the site.

53. There is no evidence that local tourism has declined since the development of Farr wind farm, or that tourists would be deterred from visiting the area if the current proposal was implemented. National research does not support the contention that wind farms have a significant effect on tourism.

#### Cultural heritage

54. There are no designated cultural heritage sites within the appeal site, and no significant impacts are predicted on nearby historic assets. The nearest listed building is 2.9km from the nearest turbine, and would not have visibility of any of the turbines. The council's Archaeologist is satisfied that a planning condition would enable appropriate mitigation, and would ensure that the stone markers associated with the Druim an Tuirc burial chamber would be protected or left undisturbed.

#### Water and drainage

55. Findhorn District Salmon Fishery Board requested the appointment of an independent consultant to carry out a desktop review to assure the Board that the risk of peat failure and water pollution was minimised. However the issues of peat and water pollution, and impacts on the River Findhorn and associated fishing interests, are addressed in the ES, and neither SEPA nor SNH raised objection on those grounds bearing in mind the mitigation measures proposed.

56. Having assessed the issues of pollution prevention and management, peat disturbance, impacts on groundwater dependent terrestrial ecosystems, direct impacts on the water environment, decommissioning and final site restoration, SEPA did not object to the proposal. However SEPA asked that planning conditions be imposed to secure a



habitat management plan, a CEMP and a peat management plan, and to ensure no infrastructure is located within 50 metres of a watercourse.

#### Other grounds of objection

57. The impact on roads, traffic and public access is examined within the ES, and the conclusion that there would be no unacceptable impact has not been challenged by Transport Scotland (in respect of the A9), or the council's Traffic & Transport Planning team or Access Officer.

58. Construction impacts would be managed by the adoption of the CEMP, which would set out the mitigation measures to minimise adverse impact on the environment.

#### Objection by Coignafearn Estate

59. An extensive objection was made to the appeal proposal on behalf of the owner of the above nearby estate (who did not object to the planning application). The objection makes detailed comments on peat as an asset, water and riparian areas, natural heritage, landscape (including wild land) and visual impact, archaeology and cultural heritage, economic impact and tourism, roads/ traffic impact and public access, development plan policies and Scottish Government planning policy and guidance. Concerns are also expressed about the impact of a possible 'Garbole' substation, and the adequacy of the developer's environmental impact statement.

60. Many of the issues raised have already been discussed above, notably landscape and visual impact, natural heritage, cultural heritage, economic/tourism impact, and roads, traffic and public access. The ES (including the technical appendices) assesses the impact on peat as a resource and on carbon emissions, and the relevant conclusions are endorsed by SEPA and SNH. SEPA was satisfied that the layout generally avoids the areas of deepest peat, and supported the approach to excavated materials set out in the ES. The carbon payback calculations in the ES, which indicate that the development would take 2.4 years to repay the carbon exchange to the atmosphere, are not disputed.

61. Having regard to the comments of the statutory consultees (SNH and SEPA), and the mitigation measures and conditions proposed, I do not consider that the estate's criticisms of the ES methodology are warranted.

62. As already indicated the viewpoint locations were chosen in consultation with the council and SNH. Nonetheless 7 wirelines were prepared to demonstrate the impact from locations identified by Strathdearn Community Council, which showed little or no impact from those viewpoints. Overall I am satisfied that there is adequate information in the ES to make a sound judgement on the landscape and visual impact of the proposal.

63. The objection does not justify why the proposal would have an adverse impact on the cited tourist facilities, which include distant attractions such as Culloden Battlefield, Carrbridge Golf Club and the Landmark Forest Adventure Park. Nor does it explain how the wind farm would impact on the objector's sporting estate.

64. I note the concern on the part of Coignafearn Estate and others about the potential impact of the proposed 'Garbole' substation and associated power lines. I understand no applications have been lodged for these proposals. They appear to be dependent on a

number of extraneous factors relating to the capacity of the existing transmission network in the area. In any case they do not form part of the application before me and I am therefore unable to take them into account in my decision.

#### Assessment against policy

65. As already stated the council's local development plan recognises the great potential of the Highland area for energy production, including onshore wind. The reason for refusal refers to a single policy, Policy 67: Renewable Energy Developments. In relation to the first part of the policy there is little doubt that the Glen Kyllachy proposal, which has a potential output of up to 50MW, would make a significant contribution towards meeting energy targets. The development would generate substantial investment and employment during construction, and a small number of jobs when the wind farm is in operation.

66. To comply with the policy the development should not be significantly detrimental overall [my emphasis], either individually or cumulatively with other developments. The policy requires the consideration of any significant effects across a range of issues in order to reach a judgement as to overall compliance.

67. I have already assessed the potential impacts above, and have concluded that due to the landform and siting adjacent to the existing Farr wind farm, there would not be a significant detrimental landscape and visual impact (including cumulative impact), or residential impact, overall. Similarly I have concluded that subject to agreed mitigation measures there would not be significant detrimental impact on cultural or natural heritage features, tourism and recreation, ground and surface water, or public access, traffic and transport. Noise could be controlled by condition, and shadow flicker is not an issue here.

68. I therefore conclude that the appeal proposal complies with Policy 67 of the local development plan.

69. There is no indication why the proposal would be contrary to Policy 28: Sustainable Design of the local development plan, which supports developments which promote and enhance the social, economic and environmental wellbeing of the people of Highland. Proposed developments are assessed against a series of criteria, some of which are inapplicable and others overlap the considerations addressed in Policy 67.

70. It is also relevant to note that the turbines would be located within an Area of Search for wind energy identified in the council's Interim Supplementary Guidance on Onshore Wind Energy, where there are no significant constraints on development and appropriate proposals are likely to be supported subject to detailed consideration against identified criteria (i.e. Policy 67).

71. The proposal gains general support from national planning policy, which is an important material consideration. Scottish Planning Policy (SPP) and National Planning Framework 3 (NPF3) reiterate the Scottish Government's commitment to achieve its ambitious climate change targets, and its support for the expansion of renewable energy generation capacity in appropriate locations. The relevant considerations listed in paragraph 169 of SPP have already been addressed above. For the reasons already stated I am satisfied that the proposal is consistent with the requirements for wind farm developments set out in SPP.

72. The suggestion on behalf of SAWD and SOS that the precautionary principle should be applied and that no more wind turbines should be permitted until a landscape capacity study for the area is carried out has no foundation in national or development plan policy. Indeed paragraph 166 of SPP makes clear that moratoria on onshore wind developments are not appropriate.

73. I conclude that the proposed development is consistent with relevant development plan policy and is supported by national planning policy.

#### Conditions

74. I am content that the conditions proposed in the officer's committee report are necessary and appropriate, and would ensure the effects of the development are satisfactorily mitigated. I have made a few minor corrections and clarifications.

75. The appellants agree with the terms of the council's proposed conditions, with the exception of condition 20 relating to noise immissions. They suggest a number of modifications to that condition, which the council is happy to accept. However the appellants maintain that it would not be appropriate to impose an amplitude modulation condition as the council suggests, since there is no consensus as to the definition of the term or an appropriate means of control. I see no reason to depart from current practice, which is noted in the Institute of Acoustics good practice guide, not to impose a planning condition to deal with amplitude modulation.

#### Overall conclusions

76. I therefore conclude, for the reasons set out above, that the proposed development accords overall with the relevant provisions of the development plan and that there are no material considerations which would still justify refusing to grant planning permission.

*Timothy Brian*

Assistant Chief Reporter

## Conditions

1. This planning permission shall expire and cease to have effect after a period of 30 years from the date when electricity is first exported to the electricity grid network (the 'First Export Date'). Upon the expiration of a period of 25 years from the First Export Date, the wind turbines shall be decommissioned and removed from the site, with decommissioning and restoration works undertaken in accordance with the terms of condition 2 of this permission. Written confirmation of the First Export Date shall be submitted in writing to the planning authority within one month of the First Export Date.

Reason: Wind turbines have a projected lifespan of 25 years, after which their condition is likely to be such that they require to be replaced, both in terms of technical and environmental considerations. This limited consent period also enables a review and, if required, re-assessment to be made of the environmental impacts of the development and the success, or otherwise, of noise impact, species protection, habitat management and mitigation measures. The 30 year cessation date allows for a 5 year period to complete commissioning and site restoration work.

2. No development shall commence until a draft Decommissioning and Restoration Plan (DRP) for the site has been submitted to, and approved in writing by, the planning authority in consultation with Scottish Natural Heritage (SNH) and Scottish Environment Protection Agency (SEPA). Thereafter and no later than 12 months prior to the decommissioning of the development a detailed DRP, based upon the principles of the approved draft plan, shall be submitted to, and approved in writing by, the planning authority, in consultation with SNH and SEPA. For the avoidance of doubt, the DRP shall include the removal of all above ground elements of the development, all new (as opposed to existing at the time of the grant of planning permission) access tracks required for the development including any new access tracks retained from the Farr Wind Farm not decommissioned by that project, the treatment of disturbed ground surfaces, management and timing of the works, environmental management provisions and a traffic management plan to address any traffic impact issues during the decommissioning period. The Decommissioning and Restoration Plan shall be implemented as approved.

Reason: To ensure that all wind turbines and associated development are removed from site should the wind farm become largely redundant, in the interests of safety, amenity and environmental protection.

3. No development shall commence until a financial guarantee using an Agreement under Section 69 of the Local Government (Scotland) Act 1973 (or equivalent legal agreement mechanism) is in place with the Highland Council to secure the proper decommissioning of the wind farm and site reinstatement as set out within the approved draft Decommissioning and Restoration Plan required under Condition 2 above.

Reason: To ensure the necessary finances to guarantee final site restoration.

4. The wind farm operator shall, at all times after the First Export Date, record information regarding the monthly supply of electricity to the national grid from each turbine within the development and retain the information for a period of at least 24 months. The information shall be made available to the planning authority within one month of any request by them. In the event that:
1. any wind turbine installed and commissioned fails to supply electricity on a commercial basis to the grid for a continuous period of 6 months, then the wind turbine in question shall be deemed to have ceased to be required. Under such circumstances, the wind turbine, along with any ancillary equipment, fixtures and fittings not required in connection with retained turbines, shall, within 3 months of the end of the said continuous 6 month period, be dismantled and removed from the site and the surrounding land fully reinstated in accordance with this condition; or
  2. the wind farm fails to supply electricity on a commercial basis to the grid from 50% or more of the wind turbines installed and commissioned and for a continuous period of 12 months, then the wind farm operator shall notify the planning authority in writing immediately. Thereafter, the planning authority may direct in writing that the wind farm shall be decommissioned and the application site reinstated in accordance with this condition. For the avoidance of doubt, in making a direction under this condition, the planning authority shall have due regard to the circumstances surrounding the failure to generate and shall only do so following discussion with the wind farm operator and such other parties as they consider appropriate.

All decommissioning and reinstatement work required by this condition shall be carried out in accordance with the approved detailed decommissioning and reinstatement plan or, should the detailed decommissioning and reinstatement plan not have been approved at that stage, other decommissioning and reinstatement measures, based upon the principles of the approved draft DRP, as may be specified in writing by the planning authority.

Reason: To ensure that any redundant or non-functional wind turbines are removed from site, in the interests of public safety, amenity and environmental protection.

5. The development shall be undertaken in accordance with the application, approved layout drawing number 000003 dated 28 May 2013, the mitigation cited within the supporting Environmental Statement (ES) and in compliance with the planning conditions attached to this planning permission. For the avoidance of doubt the turbines, access tracks and crane hard-standing areas may be micro-sited but no more than 50 metres from the positions shown in the approved plans unless otherwise agreed in writing with the planning authority in consultation with SEPA and SNH. Micro-siting will also be constrained to ensure 50 metre buffers are retained from all watercourses, areas valued for ground water dependent terrestrial ecology and montane heath.

Reason: To ensure the development is carried out in accordance with the approved plans with some flexibility to take account of local site conditions uncovered at the final design and construction stage.

6. The application hereby approved includes development options with regard to the siting of the proposed sub-station within the application site. For the avoidance of any doubt, prior to the commencement of any development on site the developer shall supply finalised details for approval of the planning authority on which options for the sub-station is to be pursued, thereby confirming the area of ground for the alternative option to be left undisturbed. The final design for each element must demonstrate an element of micro-siting to minimise impact on groundwater dependent terrestrial ecosystems as already advised by SEPA.

Reason: To ensure the development is undertaken with the least environmental impact and with minimal disturbance on valued groundwater ecosystems.

7. No development shall commence until full details of the proposed wind turbines have been submitted to, and approved in writing by, the planning authority. These details shall include:
- i. The make, model, design, power rating and sound power levels of the turbines to be used; and
  - ii. The external colour and/or finish of the turbines to be used (incl. towers, nacelles and blades) which shall be non-reflective pale grey semi-matt.

Thereafter, development shall progress in accordance with these approved details and, with reference to part ii above, the turbines shall be maintained in the approved colour, free from external rust, staining or discoloration, until such time as the wind farm is decommissioned. For the avoidance of doubt, all wind turbine blade shall rotate in the same direction.

Reason: To ensure that the turbines chosen are suitable in terms of visual, landscape, noise and environmental impact considerations.

8. Unless otherwise agreed in writing by the planning authority, all of the wind turbine transformers shall be located within the tower of the wind turbine to which they relate. Agreement for external transformers shall only be given if the developer can, through detailed design work and additional landscape and visual impact assessment, demonstrate, to the satisfaction of the planning authority, that they would not adversely affect the character, integrity or general amenity of the application site and its setting.

Reason: To make clear that ancillary elements of the development, such as external transformers, are only permissible if, following additional design and LVIA work, they are demonstrated to be acceptable in terms of visual, landscape, noise and other environmental impact considerations.

9. Notwithstanding the provisions of the Town and Country Planning (Control of Advertisements) (Scotland) Regulations 1984 (as amended), and unless there is a demonstrable health and safety or operational reason, none of the wind turbines, anemometers, power performance masts, switching stations or transformer buildings/ enclosures, ancillary buildings or above ground fixed plant shall display any name, logo, sign or other advertisement without express advertisement consent having been granted on application to the Planning Authority.

Reason: To ensure that the turbines are not used for advertising, in the interests of visual amenity.

10. No development shall commence until full details of the final location, layout, external appearance, dimensions and surface materials of all control buildings, welfare facilities, compounds and parking areas, as well as any fencing, walls, paths and any other ancillary elements of the development, have been submitted to, and approved in writing by, the planning authority (in consultation with SEPA and SNH, as necessary). Thereafter, development shall progress in accordance with these approved details. For the avoidance of doubt, details relating to the control, substation and welfare buildings shall include additional architectural design, LVIA and other relevant assessment work, carried out by suitably qualified and experienced people, to ensure that they are sensitively scaled, sited and designed. For the avoidance of doubt the deployment of peat bunds for screening of such buildings/ equipment is not permitted.

Reason: To ensure that all ancillary elements of the development are acceptable in terms of visual, landscape and environmental impact considerations.

11. No development shall commence until a scheme of aviation lighting is submitted to, and approved in writing by, the planning authority after consultation with the Ministry of Defence. Thereafter the approved scheme of aviation lighting shall be fully implemented on site. The Company shall provide both the Ministry of Defence (MOD) and the Defence Geographic Centre (AIS Information Centre) with a statement, copied to the planning authority and Highlands and Islands Airports Limited, containing the following information:

- a. The date construction starts and ends;
- b. The exact position of the wind turbine towers in latitude and longitude;
- c. A description of all structures over 300 feet high;
- d. The maximum extension height of all construction equipment;
- e. The height above ground level of the tallest structure; and
- f. Details of an infra-red aviation lighting scheme as agreed with the MOD, other aviation interests and the planning authority.

Reason: To ensure that the erected turbines present no air safety risk and in the interest of visual amenity.

12. No development shall commence until a community liaison group is established by the developer, in collaboration with The Highland Council and local Community Councils. The group shall act as a vehicle for the community to be kept informed of

project progress and, in particular, should allow advanced dialogue on the provision of all transport-related mitigation measures and to keep under review the timing of the delivery of turbine components. This should also ensure that local events and tourist seasons are considered and appropriate measures are taken to co-ordinate deliveries and work with these and any other major projects in the area to ensure no conflict between construction traffic and the increased traffic generated by such events/ seasons/ developments. The liaison group, or element of any combined liaison group relating to this development, shall be maintained until the wind farm has been completed and is fully operational.

Reason: To assist with the provision of mitigation measures to minimise potential hazards to road users, including pedestrians, travelling on the road networks.

13. Prior to commencement of deliveries to site, a Route Access Report including swept path analysis shall be undertaken to ensure that exceptional loads can be safely transported through the trunk road network. The complete report shall detail any accommodation measures required including the temporary removal of street furniture, junction widening, traffic management etc. and show that the transportation will not have any detrimental effect on structures within the route path.

Reason: To minimise interference and maintain safety and free flow of traffic on the trunk road as a result of the traffic moving to and from the development.

14. During the delivery period of the wind turbine construction materials, any additional signing or temporary traffic control measures as identified and deemed necessary by a recognised QA traffic management consultant due to the size or length of any loads being delivered or removed shall be approved by Transport Scotland before delivery commences.

Reason: To ensure that the transportation will not have any detrimental effect on the road and structures along the route.

15. During construction, vehicle wheel washing facilities shall be provided within the site at a suitable location prior to vehicle departure onto the A9 trunk road.

Reason: To ensure that material from the site is not deposited on the trunk road to the detriment of road safety.

16. Prior to the commencement of development, an updated traffic impact statement shall be submitted to the planning authority for final approval in consultation with the roads authority. Where departures are proposed from the initial traffic impact assessment, these shall be supported with an agreed pre-construction survey assessment and appropriate mitigation to safeguard the integrity of the local road network including if necessary the prior provision of a 'wear and tear' agreement and associated financial bond.

Reason: To ensure that all construction traffic will not have detrimental effect on the road and structures to be used in the construction of the development and provisions are in place to ensure repairs can be implemented.



17. No development shall commence until an Access Management Plan is submitted for the approval of the planning authority to detail:-

- how construction traffic will be managed to ensure general access to the countryside will be sustained/improved during the construction period.
- permanent site signage and access control (gates) etc. to facilitate public access provision including walkers, cyclists and by horse during the operation of the development when the wind farm tracks are available for public access.

The approved plan shall then be implemented on an agreed timetable.

Reason: To ensure public access to the countryside is not unnecessarily impeded as a result of this development, including during its construction.

18. No development shall commence until a finalised Construction Environmental Management Document (CEMD) is submitted to and agreed in writing by the planning authority in consultation with SNH and SEPA. The document shall include:

- an updated Schedule of Mitigation (SM).
- processes to control/action changes from the agreed Schedule of Mitigation.
- the following specific Construction and Environmental Management Plans (CEMP):
  - i. Peat Management Plan – to include details of all peat stripping, excavation, storage and reuse of material in accordance with best practice advice published by SEPA and SNH. This shall for example highlight how sensitive peat areas are to be marked out on site to prevent any vehicle causing inadvertent damage.
  - ii. Management of Geo-technical Risks including provision of a completed Peat Landslide Risk Assessment.
  - iii. Water Management Plan – highlighting drainage provisions including monitoring/maintenance regimes, deployment of water-crossings using bottomless culverts, surface water drainage management (SUDs) and development buffers (50 metres minimum) from watercourses, local springs and identified groundwater dependent terrestrial ecosystems.
  - iv. Pollution Prevention Plan.
  - v. Site Waste Management Plan.
  - vi. Construction Noise Mitigation Plan.
  - vii. Species Protection Plan for otter, wildcat, bats, pine martin, water vole, breeding birds (merlin, black grouse, curlew) and groundwater dependent terrestrial ecosystems including details of pre-commencement surveys and development of buffer areas to prevent encroachment on protected species and valued habitat.
  - viii. Site Landscaping and Restoration Plan highlighting measures to ensure grazing animals including deer do not damage restored and reinstated ground.
  - ix. A Habitat Management Plan to mitigate the loss of priority habitat including avoidance of development upon montane heath and minimisation of impact on blanket bog and upland dry heath highlighting works including peatland

- management to compensate for losses within and beyond the development site including effective monitoring and reporting post construction.
- x. A Deer Management Plan addressing deer numbers on site, construction displacement, the potential for the wind farm to create new sources of food and/or shelter, the impacts this may have and how this will be monitored and managed over time. It should also take into account any other potentially competing objectives for the site (e.g. habitat restoration), and seek the optimum outcome for both.
  - xi. Woodland Management Plan highlighting the extent of works, albeit limited, to be undertaken within the application site and confirming the volume/area of compensatory planting to be provided.
- details of the appointment of an appropriately qualified Environmental Clerk of Works with roles and responsibilities which shall include but necessarily limited to:
    - i. providing training to the developer and contractors on their responsibilities to ensure that work is carried out in strict accordance with environmental protection requirements;
    - ii. monitoring compliance with all environmental and nature conservation mitigation works and working practices approved under this consent;
    - iii. advising the developer on adequate protection for environmental and nature conservation interests within, and adjacent to, the application site;
    - iv. directing the placement of the development (including any micro-siting, as permitted by the terms of this consent) and the avoidance of sensitive features; and
    - v. the power to call a halt to development on site where environmental considerations warrant such action.
  - details of any other methods of monitoring, auditing, reporting and communication of environmental management on site and with the client, planning authority and other relevant parties.
  - statement of any additional persons responsible for 'stopping the job/activity' if in potential breach of a mitigation or legislation occurs.

Unless otherwise agreed in writing by the planning authority the development shall proceed in accordance with the agreed CEMD.

Reason: To protect the environment from the construction and operation of the development and secure final detailed information on the delivery of all on-site mitigation projects.

19. No development or work (including site clearance) shall commence until a programme of work for the evaluation, preservation and recording of any archaeological and historic features affected by the proposed development/work, including a timetable of investigation has been submitted to, and approved in writing by, the planning authority. The approved programme shall be implemented in accordance with the agreed timetable for investigation.

Reason: In order to protect the historic interest of the site.

20. The rating level of noise immissions from the combined effects of the wind turbines comprising the Glen Kyllachy wind farm (including the application of any tonal penalty) hereby permitted together with the noise immissions of the wind turbines comprising the Farr wind farm (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the tables attached to these conditions at any dwelling which is lawfully existing or has planning permission at the date of this permission and:

The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) of Glen Kyllachy wind farm when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed 35dB LA90 at the consented dwelling site at grid reference 824550 275303 and:

- a) The wind farm operator shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The wind farm operator shall provide this information in the format set out in Guidance Note 1(e) to the planning authority on its request, within 14 days of receipt in writing of such a request.
- b) No electricity shall be exported until the wind farm operator has submitted to the planning authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the planning authority.
- c) Within 21 days from receipt of a written request from the planning authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the planning authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the 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 planning authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
- (d) Prior to the commencement of any measurements by the independent consultant to be undertaken in accordance with these conditions, the wind farm operator shall submit to the planning authority for written approval the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken. Measurements to assess compliance with the noise limits set out in the Tables attached to these conditions or approved by the planning authority pursuant to paragraph (f) of this condition shall

be undertaken at the measurement location approved in writing by the planning authority.

(e) Prior to the submission of the independent consultant's assessment of the rating level of noise immissions pursuant to paragraph (g) of this condition, the wind farm operator shall submit to the planning authority for written approval a proposed assessment protocol setting out the following:

(i) The range of meteorological and operational conditions (the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions.

(ii) A reasoned assessment as to whether the noise giving rise to the complaint contains or is likely to contain a tonal component.

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 information provided in the written request from the planning authority under paragraph (c), and such others as the independent consultant considers necessary to fully assess the noise at the complainant's property. The assessment of the rating level of noise immissions shall be undertaken in accordance with the assessment protocol approved in writing by the planning authority and the attached Guidance Notes.

(f) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, the wind farm operator shall submit to the planning authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from the Tables specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the planning authority for the complainant's dwelling.

(g) The wind farm operator shall provide to the planning authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the planning authority made under paragraph (c) of this condition unless the time limit is extended in writing by the planning authority. All data collected for the purposes of undertaking the compliance measurements shall be made available to the planning authority on the request of the planning authority. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1(a) and certificates of calibration shall be submitted to the planning authority with the independent consultant's assessment of the rating level of noise immissions.

(h) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the planning authority.

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

Location	Standardised wind speed at 10 metre height (m/s) within the site averaged over 10-minute periods											
	1	2	3	4	5	6	7	8	9	10	11	12
Ardachy Consented Property	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8
Asgard	36.4	36.4	36.4	36.4	36.4	36.8	37.5	38.5	39.8	41.2	41.9	41.9
Corrievorrie	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8
Dalmagarry	46.9	46.9	46.9	46.9	48.4	49.9	51.3	52.8	54.3	55.8	56.5	56.5
Easter Woodend	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8
Gaich	35.0	35.0	35.0	35.0	35.0	35.4	37.9	39.9	40.6	40.6	40.6	40.6
Garbole	36.4	36.4	36.4	36.4	36.4	36.8	37.5	38.5	39.8	41.2	41.9	41.9
Kennels House	35.0	35.0	35.0	35.0	35.0	35.0	35.4	38.3	40.9	43.1	44.0	44.0
Kyllachy House	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8
Moy More House	35.0	35.0	35.0	35.0	36.1	38.3	40.8	43.3	45.7	47.8	48.7	48.7
Tomatin Consented Property	35.0	35.0	35.0	35.0	35.0	36.9	39.4	42.4	45.7	49.6	51.6	51.6
Tomatin Distillery	35.0	35.0	35.0	35.0	35.0	36.9	39.4	42.4	45.7	49.6	51.6	51.6
Wester Auchintoul Lodge	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8
Wester Lairgs	35.0	35.0	35.0	35.0	35.0	35.0	35.3	37.0	38.9	41.1	42.3	42.3
Woodend	35.0	35.0	35.0	35.0	35.0	35.0	37.4	39.7	41.6	42.6	42.8	42.8

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

Location	Standardised wind speed at 10 metre height (m/s) within the site averaged over 10-minute periods											
	1	2	3	4	5	6	7	8	9	10	11	12
Ardachy Consented Property	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6
Asgard	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.4	39.4	39.4	39.4
Corrievorrie	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6
Dalmagarry	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.8	39.7	39.7	39.7
Easter Woodend	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6
Gaich	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.4	38.4	38.4
Garbole	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.4	39.4	39.4	39.4
Kennels House	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.9	38.9	38.9
Kyllachy House	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6
Moy More House	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.2	41.2	44.8	44.8	44.8
Tomatin Consented Property	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	42.0	46.9	46.9	46.9
Tomatin Distillery	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	42.0	46.9	46.9	46.9
Wester Auchintoul	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6
Wester Lairgs	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Woodend	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.2	41.6	41.6	41.6

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

Property	Easting	Northing
Asgard	275666	824218
Dalmagarry	278793	832298
Easter Woodend	279388	826364
Gaich	268940	831224
Kennels House	267617	829078
Moy More House	276649	835444
Tomatin Distillery		
Wester Lairgs	270408	834885
Corrievorrie	277304	824768
Garbole	275623	824224
Kyllachy House	278624	825925
Wester Auchintoul	278196	824492
Woodend	279124	826217
Ardachy Consented Property	277821	825138
Tomatin Consented Property	278287	829146

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

### Guidance Notes for Wind Farm Noise Conditions

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

#### Guidance Note 1

(a) Values of the LA90,10 minute noise statistic should be measured at the complainant’s property, using a sound level meter of EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 – 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the planning authority, and placed outside the complainant’s dwelling. Measurements should be made in “free field” conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, the wind farm operator shall submit for the written approval of the planning authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90,10 minute measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1(d), including the power generation data from the turbine control systems of the wind farm.

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

(e) Data provided to the planning authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10-minute periods synchronised with the periods of data recorded in accordance with Note 1(d).

#### Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b).

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1. In specifying such conditions the planning authority shall have regard to those conditions which prevailed during times when the complainant alleges there was disturbance due to noise or which are considered likely to result in a breach of the limits.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1(d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

#### Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

(b) For each 10 minute interval for which LA90,10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares “best fit” linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the “best fit” line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.

#### Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the planning authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2.

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant’s dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The wind farm operator shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the planning authority in its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:  $L1 = 10\log [10L2/10 - 10L3/10]$

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the planning authority for a complainant’s dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the planning authority for a complainant’s dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.



## Advisory notes

- 1. The length of the permission:** This planning permission will lapse on the expiration of a period of three years from the date of this decision notice, unless the development has been started within that period (See section 58(1) of the Town and Country Planning (Scotland) Act 1997 (as amended)).
- 2. Notice of the start of development:** The person carrying out the development must give advance notice in writing to the planning authority of the date when it is intended to start. Failure to do so is a breach of planning control. It could result in the planning authority taking enforcement action (See sections 27A and 123(1) of the Town and Country Planning (Scotland) Act 1997 (as amended)).
- 3. Notice of the completion of the development:** As soon as possible after it is finished, the person who completed the development must write to the planning authority to confirm the position (See section 27B of the Town and Country Planning (Scotland) Act 1997 (as amended)).