



Decision by Mike Croft, a Reporter appointed by the Scottish Ministers

- Planning appeal reference: PPA-310-2028.
- Site address: Clydeport Hunterston Terminal Facility, approximately 2.5 km south-west of Fairlie.
- Appeal by SSE Generation Ltd against the failure of North Ayrshire Council to issue a decision within the prescribed period.
- Application for planning permission reference 17/00034/PPM dated 13 January 2017 to carry out the development without compliance with condition 1 imposed in the grant of planning permission N/14/00164/PPM dated 23 April 2014.
- The development proposed: the erection of up to 3 wind turbines with a maximum tip height of 198.5 metres and ancillary infrastructure, including foundations, crane hardstandings, access tracks, three temporary meteorological masts, transformers, underground cabling, substation, control building, welfare facilities and a temporary construction compound.
- Date of site visit by Reporter: 28 September 2017.

Date of appeal decision: 9 January 2018.

Decision

I allow the appeal and grant planning permission for the erection of up to 3 wind turbines with a maximum tip height of 198.5 metres and ancillary infrastructure, including foundations, crane hardstandings, access tracks, three temporary meteorological masts, transformers, underground cabling, substation, control building, welfare facilities and a temporary construction compound, in accordance with the application reference 17/00034/PPM, subject to the 20 conditions listed in the annex to this notice.

Preliminary matters

1. Fairlie Community Council¹ considers that the 2.5 km distance referred to above misrepresents the proximity of Fairlie to the turbines. In fact the nearest part of the appeal site is about 2.5 km from Fairlie rail station. However, the site is better described as being south-west of Fairlie rather than (as in the application to the planning authority) west of it, so I amend that part of the address (as above).

¹ Although other community councils in the locality have made representations on this case, I refer below to Fairlie Community Council as "the community council". I refer to North Ayrshire Council as "the planning authority" or "the authority".



2. The development described in the fifth bullet point in the banner heading above was permitted under reference N/11/00679/PPM on 14 February 2012. It was subject to 21 conditions. The applicant had requested a five-year time limit from the date of commissioning of the first turbine, but condition 1 imposed a rather tighter limit as follows: *“That the site shall be used as a facility for the testing of a maximum of 3 off-shore wind turbines at any given time for a period of 5 years from the date of operation of the first turbine, prior notification of which commencement date of operation of the first turbine shall be submitted in writing to North Ayrshire Council as Planning Authority; at the expiry of the 5 year period or 14th October, 2017 whichever is the earlier, the wind turbines and associated infrastructure shall be removed and the land restored to its former condition within 6 months, in accordance with a Decommissioning Method Statement to be agreed in writing with North Ayrshire Council as Planning Authority prior to the commencement of the development. If planning permission for the proposed multi-fuel power station at Hunterston is granted, the wind turbine test facility shall not be operational at the same time as the testing or operational phases of the multi-fuel power station.”*

3. Permission was then granted on 23 April 2014 under reference N/14/00164/PPM for a variation of the 2012 permission. In particular, this revised the wording of two conditions and deleted a further condition. Condition 1 (as quoted above) remained unchanged. With other changes, 21 conditions were again imposed in 2014. I regard the 2014 permission as the one under which the site was operating at the date of the appeal application.

4. The appeal application and therefore this appeal seek a variation of condition 1 on planning permission N/14/00164/PPM to extend the operational time period of the testing facility until 14 October 2019. However, the appeal application is properly regarded as an application for a fresh permission rather than an application to vary a previous permission. Section 42(2) of the 1997 Act, which applies to cases like this, says that, on such an application, the planning authority (and on appeal, Scottish Ministers) “may only consider the question of conditions subject to which planning permission should be granted”. However, this provision is not as restrictive as these words might suggest and does not preclude consideration of the overall effect of granting a new planning permission. If I were to find, for example, unacceptable environmental effects it would certainly be open to me to dismiss the appeal on that basis. That is an important starting point for my consideration of this appeal.

5. A full Environmental Impact Assessment (EIA) and Environmental Statement (ES) were prepared in 2011 prior to the first permission. The community council is concerned that it is not possible to properly consider what is now proposed without a fully up-to-date EIA and ES. But I have no reason to question the planning authority’s view that the appeal application did not require an environmental impact assessment under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (or the previous regulations on environmental impact assessments). In my view the ES update provided by the appellant with the appeal application, together with all the other relevant environmental evidence, is sufficient.

6. Although the planning authority did not issue a decision in this case within the prescribed period, it has submitted a statement of case which includes three reasons why it considers the appeal should fail, with supporting material.

Reasoning

Introduction

7. The turbine testing facility occupies a small proportion of a marine construction yard located on a man-made promontory on the North Ayrshire coast. There is other large-scale development nearby. Hunterston A Power Station was a nuclear power station to the south, generating electricity between 1964 and 1990, since when it has been decommissioned. A later nuclear power station to the south, Hunterston B, continues to generate electricity. To the east and north-east of the appeal site is the Hunterston Terminal, built in the 1970s. This was an ore-handling facility, and then a coal-handling facility, with a 1.6 km long jetty capable of handling very large ships; it has substantial vertical structures, and a large stocking area with conveyors. The terminal is currently unused.

8. Although permission for three turbines on the appeal site was granted in 2012 and 2014, there have never been more than two turbines at the testing facility. The appellant says that there are no plans to erect a third turbine. During the course of this appeal there have been two turbines at the site. SSE own a 6 MW Siemens SWT- 6.0 154 turbine; and Mitsubishi hold a sub-lease from SSE and operate a 7.2 MW Mitsubishi Sea Angel turbine. The first testing began with the Siemens turbine in March 2014, and testing of the Mitsubishi turbine began in May 2015. Testing of the Siemens turbine was suspended in March 2017, owing to the need for blade repairs, and it was not operational during my site inspection. The Mitsubishi turbine was in operation during my visit to the area. There are also meteorological masts and ancillary buildings on the site.

9. The determining issues in this appeal are

(a) whether extending the life of the testing facility to October 2019 would be (i) so harmful to the appearance and heritage of the surrounding area that permission should be refused for that reason notwithstanding (ii) the benefits of the facility, and

(b) whether evidence of adverse effects on the health of the local population is sufficient to justify or support refusal.

Issue (a)(i): harm to the appearance and heritage of the surrounding area

10. On this issue, which encompasses the planning authority's first two reasons for considering that the appeal should fail, the authority refers to a number of development plan policies. The development plan is the North Ayrshire Local Development Plan (LDP), adopted in May 2014.

11. One of the policies referred to is the plan's general policy, and the planning authority contends that the proposal before me would be contrary to that policy's criteria (a), (b) and

(c). The general policy says that all development proposals will be determined against general criteria, as relevant, with detailed criteria setting out the framework and applying, as appropriate, to all development. Criterion (a) is headed "Siting, Design and External Appearance", and requires siting of development to have regard to the visual effects of the development on the surrounding area and landscape. Criterion (b), "Amenity", says development should have regard to the character of the area in which it is located and should avoid significant adverse impact on biodiversity and upon natural heritage resources, including those outwith designated sites and within the wider countryside. Criterion (c), "Landscape Character", says development should seek to protect the landscape character from insensitive development and the Ayrshire Landscape Character Assessment shall be used to assist assessment of significant proposals.

12. The planning authority also says that the current proposal would be contrary to policy PI9. This says that proposals for the development of wind turbines shall accord with the LDP subject to them satisfying all of 10 specified criteria. The criteria include these: (a) the development is appropriate in design and scale to its surroundings; (b) it can be demonstrated that there is no unacceptable adverse impact on the intrinsic landscape qualities of the area (especially for areas with a specific landscape designation, and coastal areas); (c) in the case of individual wind turbine or wind farm development, that the proposed development is not in an area designated as "high sensitivity" in the "Landscape Capacity Study for Wind Farm Development in North Ayrshire"; (d) the proposal shall not result in unacceptable intrusion, or have an unacceptable adverse effect on the natural, built, cultural or historic heritage of the locality; (h) there are no unacceptable impacts due to the cumulative impact of development proposals; and (i) the proposal satisfies the contents of the Ayrshire Supplementary Guidance: Wind Farm Development (October 2009).

13. The planning authority also cites LDP policy ENV 8(1) as conflicting with the appeal proposal. This says, in relation to the developed coast (which includes the appeal site), that the authority will avoid approving development which would result in coalescence of development along the coast.

14. The authority further cites conflict with policy HE2(a) which says that proposals which would have an adverse impact on a listed building or its setting shall not accord with the LDP, and with policy HE 5(a) which says that proposals which would adversely affect historic gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes in Scotland shall not accord with the LDP.

15. So far as general impact on the appearance of the locality is concerned, I give considerable weight to the Landscape and Visual Impact Assessment (LVIA), submitted in support of the application that received permission in 2012. That assessment chose viewpoints (in consultation with the planning authority and Scottish Natural Heritage) as representative of the main sensitive receptors in the surrounding area. Based on a worst case scenario of three turbines to a maximum height of 198.5 metres, the assessment identified significant effects from the development on its own and cumulatively on landscape character and visual amenity within a 9 km radius. Receptors experiencing significant effects on visual amenity within this area would include sea kayakers, sailors and

ferry passengers, road users, rail passengers and residents of parts of West Kilbride, Fairlie, Largs, Millport and (on Bute) Kilchattan Bay. Outwith this envelope visual effects would be mitigated by a combination of intervening topography and/or distance. As seen at that time, the predicted effects would have a maximum duration of five years and, for all intents and purposes, would be entirely reversible. Significant effects from the development on its own and cumulatively were predicted for four different landscape character types. However, the assessment also noted the influence nearby of a working quayside, the large scale and prominent Hunterston Terminal, and Hunterston A and B power stations and other infrastructure.

16. My own visit to the area included observations from a wide range of viewpoints, including a number of the LVIA viewpoints, from West Kilbride in the south to Largs in the north, and including some elevated views from inland locations; I also visited Millport and other parts of the Isle of Cumbrae. The visual obtrusiveness of the existing turbines was very evident to me from many of these viewpoints, and I see no reason to depart from the LVIA's conclusions, including its reference to the other adverse influences nearby which cannot be ignored as part of the local context. On that basis I agree with the planning authority to the extent that the broad thrust of the policies I refer to in paragraphs 11 and 12 above tells against what is now proposed. Some of the policies add little to the equation: for instance I do not see the appeal proposal as development resulting itself in coalescence of development along the coast (policy ENV 8(1)) given the extent of development on the appeal site already and the existing policy commitment to development there in the long term (see paragraphs 18-20 below). But the overall policy thrust is clear.

17. In addition I note the planning authority's references to adverse impact on listed buildings or their settings (Hunterston Castle and Hunterston House about 2 km from the turbines) and adverse impact on a historic garden and designed landscape (Kelburn Castle). It seems to me, however, that the existence of local tree cover provides a substantial degree of mitigation in the case of Hunterston Castle and Hunterston House and from many viewpoints around Kelburn Castle. So these points add little to my concern.

Issue (a)(ii): the benefits of the facility

18. There are also LDP policies related to this second part of issue (a). Policy IND 1 is clearly important. It says *"The LDP identifies the following as Strategic Business Locations: ... Hunterston National Development - for nationally important development as identified in Policy IND 2 ... These sites will be protected from inappropriate uses and development which would compromise their quality, accessibility or marketability as business locations."* The accompanying text includes this: *"Hunterston has also been identified by the National Renewables Infrastructure Plan ... as a key strategic location with particular capacity for integrated manufacturing. It is the preferred location for the establishment of a Test Centre of national significance for off-shore wind turbines..."*

19. LDP policy IND 2 says *"Development of the type set out below ... shall accord with the LDP subject to the specific requirements identified.... Energy related development consistent with the national planning framework; ... Wind turbine test centre of national significance."* Policy IND 2 includes the important safeguard that *"All Development*

proposals shall ... Fully take into account the environmental sensitivities of this coastal location by providing any measures considered necessary in order to minimise, mitigate or compensate for any adverse effects on the environment or local communities; and provide for the restoration and after use of the site where appropriate". The policy also includes this: "Development for a test centre of national significance for off-shore wind turbines shall require to clearly demonstrate that it has a quayside location and internal access to import/export the prototype turbines by sea; is complementary to the development of Hunterston as an integrated manufacturing site for renewables; can demonstrate electricity infrastructure to enable electricity to be fed into the national grid; and be initially time limited (5 years maximum)."

20. Importantly in this context, Scotland's Third National Planning Framework (NPF3, June 2014) says this: *"Hunterston has long been identified as a priority for industrial and employment use. It benefits from good transport connections, and close proximity to the cities network. North Ayrshire Council and its partners are exploring future options for the site.... Future development at Hunterston should aim to make sustainable use of its key assets, including its deep water access. Activities which could align with our national strategy include manufacturing and servicing support for offshore renewable energy development, building on the success of the onshore test facility for offshore wind turbines...."*

21. I make three points about the turbine test facility, as I see it now, in relation to LDP policies IND 1 and IND 2 and in relation to NPF3. First, there is a clear policy proposal for a test centre of national significance for off-shore wind turbines here and that proposal must have been approved in the broad knowledge, at least, of its visual consequences as referred to at paragraphs 15-17 above. Any balancing exercise of planning merits must bear that in mind.

22. Secondly, the appellant quite properly emphasises the fact that a test centre of national significance for off-shore wind turbines was (through policy IND 2) to be **initially** time limited to 5 years. I therefore do not accept the planning authority's assessment that a continuation of the test facility as now sought, beyond 5 years, would be contrary in principle to policy IND 2: the policy clearly left the matter open. It is also appropriate to note that, with testing not having started until March 2014 and not having been permitted since October 2017, a permission now for testing to October 2019 would not allow for testing much beyond a total period of 5 years anyway.

23. Thirdly, representations have been made on those elements of policies IND 1 and IND 2 which refer to the potential of Hunterston as a key location for integrated manufacturing for renewables. The planning authority contends that the proposal before me presents a policy conflict because the appellant has failed to demonstrate that it would complement the development of Hunterston as an integrated manufacturing site for renewables. But the appellant provides a full answer to this when pointing out that the current proposal does not facilitate an irreversible, permanent development.

24. The important point is made that onshore testing of offshore turbines avoids a range of logistical difficulties. I am told further that suitable onshore sites are rare, and this is not

questioned. In this case turbine components are delivered directly to the site using the existing jetty at the north-eastern edge of the marine construction yard.

25. The appellant says that the time extension now sought is required to fully complete the testing of the existing turbines, enabling further understanding of wind turbine developments off the coasts of Scotland and the rest of the United Kingdom, refining and developing design, and providing maintenance opportunities. Testing results have helped to inform the decision to deploy Siemens offshore turbines at the 588 MW Beatrice Offshore Wind Farm in the Moray Firth and the recent procurement by DONG Energy for the 1.2 GW Hornsea Offshore Wind Farm in the North Sea.

26. The appellant says further that the testing facility offers a range of socio-economic benefits, including job creation, the generation of gross added value, the provision of a training facility (over 60 technicians having already been trained), and a source of business rate finance. The appellant's economic impact assessment estimates that the continued operational and maintenance of the facility over two further years would generate a further £0.4 million to the North Ayrshire economy and 4 jobs, and £10.4 million to the Scottish economy and 136 jobs, also including the supply chain.

Issue (a): conclusion

27. The existence of a turbine testing facility here has powerful support in my view from the references to it in LDP policies IND 1 and IND 2 and in NPF3. The explicitness of those references, made in broad knowledge, at least, of the facility's likely adverse consequences for the visual environment, tells strongly in my view in favour of the facility. In my assessment there is a strong case for the continuation of the facility until October 2019, as referred to at paragraphs 18-26 above. The arguments against the proposal before me in terms of visual impact have considerable force, but they are outweighed. Overall, my assessment is that, bearing in mind the benefits of the facility, extending the life of the testing facility to October 2019 would not be so harmful to the appearance and heritage of the surrounding area that permission should be refused for that reason.

28. That conclusion reflects very much the relatively short-term nature of what is at stake in this appeal. Any permission that I grant would allow testing for less than two further years, and that, when added to the period of the initial 2012 permission that has already elapsed and a removal period after October 2019, would bring the life of the facility to about 8 years in all. I do not accept the planning authority's characterisation of this as "long term use" in the context of criterion (c) of the LDP general policy. A permission in this case, in conjunction with the 2012 and 2014 permissions, would not be granting permission for development having the life-span normally envisaged for wind turbines or of the length that was no doubt envisaged for the 13 turbines specifically proposed and rejected here over a decade ago.

Issue (b): adverse effects on health and amenity

29. This issue is not represented amongst the planning authority's three formal reasons for opposing the appeal proposal. Instead, reflecting third party concerns, the authority

requests that, in determining this appeal, Scottish Ministers satisfy themselves that the development is not impacting detrimentally on the health of local residents. I take that as a corresponding request to me.

30. The representations claiming that the turbines on the site, or at least the Mitsubishi turbine, are adversely affecting local residents' health are from the community council and a number of local residents. The adverse health effects referred to include headaches, dizziness and disorientation, nausea, lack of concentration and sleeplessness. A number of representations contend that the problems started when the testing of the Mitsubishi turbine began in May 2015. I am told specifically in some cases that these effects occur when the Mitsubishi turbine is operating, they do not occur when it is not operating, and they do not occur when the respondent is out of the area. I am also told that 20 out of 70 local residents attending a public meeting in April 2017 reported that they were suffering adverse health effects which they believed were due to turbine noise. Another source says that the detrimental effects are being experienced by a growing number of people, rising from two in 2014 to 17 by September 2017.

31. There are representations (either on the appeal application or the appeal itself, or both) from eight local residents who themselves claim a link between turbine operations at the appeal site and adverse effects on their own health. I can locate residents' home addresses for six of these eight: four live in Fairlie (including at a cluster of three addresses about 3.2 km from the Mitsubishi turbine, and one other address 3.6 km away) and two in Largs (at distances of 5.7 km and 7.8 km from the Mitsubishi turbine).

32. I note that the total population of the area that includes the local settlements of Largs, Fairlie, West Kilbride and (on the Isle of Cumbrae) Millport is of the order of 20,000. However, the point is put to me that the relatively small number of people reporting adverse health effects includes only those who ascribe their ill-health to turbine operation.

33. The adverse effects are ascribed to infrasound² and/or to amplitude modulation³ generated from turbine operation. Some of those who have submitted representations are highly emphatic that it is the turbine operations, and nothing else, that are causing these adverse effects. I am told that extensive evidence is available from around the world that chronic symptoms of long term exposure to the operation of wind turbines include the symptoms reported locally here.

34. However, most of the evidence I have received from professional sources lends limited support, at most, for that view. I have the views of Health Protection Scotland (HPS), dated July 2017. As HPS's function within the National Health Service (NHS) is to help protect the Scottish public from environmental hazards, I am bound to accord its views very considerable weight.

35. HPS considered four independent systematic literature reviews, including literature on infrasound/low frequency noise and amplitude modulation. It noted that all the reviews

² Infrasound is sound below the level of human hearing, generally reckoned to be sound with a frequency lower than 20 Hz (cycles per second).

³ Amplitude modulation is the variation of noise in a regular manner when turbine blades pass the tower.

conclude that there is sufficient evidence to confirm a clear association between wind turbine noise and annoyance, and that such annoyance is related to, but not necessarily causally linked to, levels of anxiety, sleep disturbance and stress. Feelings of annoyance about wind turbines are also affected by a wide range of factors that are not related to health outcomes. Apart from this, HPS found that none of the reviews found sufficient evidence to confirm a causal relationship between wind turbine noise and the type of health complaints cited by local residents.

36. HPS considers that the balance of the objectively reviewed scientific evidence does not support there being a direct causal link between the symptoms described by local residents and the operation of nearby wind turbines. It does not exclude the possibility that there might be some sort of relationship between wind turbine noise exposure and symptoms in individual cases. But its view on balance is that the strength and consistency of the existing scientific consensus suggests this to be unlikely.

37. An earlier assessment by NHS Ayrshire & Arran (written in October 2016 in response to concerns raised by the community council) also deserves considerable weight. It reviewed what it described as “the highest quality international scientific research that is available”. It says that there is no peer-reviewed scientific data to support a claim that wind turbines are causing disease or adverse health effects in humans; that evidence for a set of health effects from exposure to wind turbines that could be characterised as a “wind turbine syndrome” is of questionable quality and does not prove causation; and that assuming that reported symptoms are solely related to a source such as wind turbines without evaluating for other known causes of these symptoms is not consistent with best medical practice. NHS Ayrshire & Arran concludes that, although the international literature suggests that wind farms can lead to concerns from the public, these concerns about health impact are not supported by good quality research.

38. I turn now to locally-based evidence put to me about the connection between the operation of turbines at the appeal site and the adverse health effects being reported. NHS Ayrshire & Arran has analysed local general practice data from 2009 to 2016 to establish whether the reporting of dizziness increased in the surrounding population once the turbines became operational. It found that the data, both for Fairlie and for other areas nearby, do not show any increase in the number of people reporting symptoms of dizziness to their doctor following the installation of the first wind turbine. The numbers were relatively consistent year-on-year. NHS Ayrshire and Arran concludes that there is no convincing evidence that the reported local symptoms of dizziness and/or nausea are caused by the appeal site turbines.

39. Further locally-based evidence is available from an assessment commissioned by the appellant to assess low frequency noise levels at a complainant’s residential property in Fairlie (within the cluster mentioned in paragraph 31 above). The survey was carried out on 36 days in October and November 2016, with the methodology having been agreed with the authority’s Environmental Health Officer (EHO) in advance. The results of the survey were accepted by the EHO. My own scrutiny of the report of the survey shows that, although there are instances of relatively high levels of low frequency noise occurring at the same time as turbine operation, there are also many instances of such levels occurring when

there was no turbine operation. Similarly, the references to particular instances of adverse health effects in the complainant's diary log do not correlate well with times of turbine operation. That tallies with the appellant's assertion that complaints have been made about the Mitsubishi turbine when its blades have not been rotating at operational speed. I agree with the EHO's view that the low frequency noise survey results do not provide evidence to support the allegation of excessive low frequency noise being emitted from the Mitsubishi turbine. I also note that the EHO has undertaken independent monitoring with similar results.

40. Although it is true (as claimed by a third party) that the literature reviews referred to above are drawn from periods prior to the operation of the Mitsubishi turbine at the appeal site, that criticism cannot properly be raised against the October – November 2016 survey: the evidence from that survey is extremely relevant to the concerns that have been expressed.

41. I note from the representations that the community council intended to present evidence to the planning authority (when it anticipated that the authority would still have jurisdiction) from "...appropriate medical tests (specific to low frequency and infrasound damage and health) ...with four "of the most severely affected people" having agreed to "the battery of tests." With the case having passed to my jurisdiction, I sought the evidence from those tests. The response to my request indicates that the three most severely affected people out of the 17 were interviewed about their medical histories by an international researcher into adverse health effects from man-made and natural infrasound. I am told that high levels of infrasound were found. But it is not clear to me that the intended "appropriate medical tests" included any systematic observation of a kind that might produce evidence to properly set against the kind of evidence I refer to at paragraphs 38 and 39 above. What is clear is that the community council's anecdotal response from the tests does not include any such evidence.

42. I refer in paragraph 31 above to a cluster of three addresses from which adverse health effects are ascribed to the Mitsubishi turbine 3.2 km distant. A specialist in physics and acoustics contends, on behalf of local residents, that the reason for this clustering of complaints is the nature of very low frequency acoustic propagation. He says: *"The combination of downward refraction (in a downwind direction) and reflection from water (or similarly from sand at low tide) leads to constructive and destructive interference between different propagation paths. There will be many positions closer to the offending turbine where the audible and infrasound immission noise level is less than that experienced by those unlucky enough to be at that particular position ..."*. However, although this points to a possible explanation, the claim that the clustering of ill-health effects is the result of turbine operation, rather than the result of something else, seems conjectural.

43. Moving towards a conclusion on this issue, it is important to note that criterion (b) of the LDP general policy says that regard should be given to the impact on amenity of levels and effects of noise and vibration. Criterion (f) says the precautionary principle may be adopted where there are good scientific or health grounds for judging that a development could cause significant irreversible damage to the environment. Third parties contend that I should apply the precautionary principle in favour of their views, and I take the words

“significant irreversible damage to the environment” in the LDP general policy to include significant irreversible damage to people living in the locality of the appeal site. I take the precautionary principle to mean in this case that harm that threatens human health that is scientifically plausible but uncertain should be avoided or reduced.

44. Paragraphs 35-37 above indicate that the literature reviews by bodies with very significant responsibilities for the health of local people find insufficient evidence to confirm a causal relationship between wind turbine noise the type of health complaints cited by some local residents. I am told that there may be some sort of relationship between wind turbine noise exposure and symptoms in individual cases, but that it is unlikely. From paragraph 37, the NHS’s assessment is that concerns about health impact are not supported by good quality research. Data specific to the locality (paragraphs 38 and 39) does not support the view that operation of the Mitsubishi turbine is the cause of the dizziness and/or nausea being reported. Although given the opportunity, the community council failed to provide evidence (paragraph 41) that can properly be set against the general tenor of the scientific evidence.

45. I appreciate that some of those who complain about dizziness and other symptoms are extremely firm in their view that these symptoms are caused by the operation of at least one of the turbines on the appeal site. But the balance of the evidence, including the literature reviews undertaken by the health authorities and the evidence from local survey and analysis, does not support complainants’ views about the root cause of their symptoms. The potential effects of the Mitsubishi turbine operating in the future at full power (unlike its mode of operation, for instance, during the survey that I refer to at paragraph 39 above), are not clear. The balance of the evidence indicates to me that further turbine testing as sought in the appeal application should not be refused on the basis of adverse effects on the health of the local population. In the event that a causal link is established between turbine operation at the appeal site and such effects, this could be addressed through environmental protection and public health legislation. Consequently, even with a reasonable application of the precautionary principle, I do not consider that the evidence of adverse effects on the health of the local population is sufficient to justify or support refusal.

Other matters, overall conclusion and conditions

46. The planning authority’s third formal reason for opposing the appeal proposal is that it considers that it would set an undesirable precedent for further developments at this sensitive location. The authority does not expand on this reason. For my part, it is clear that the appeal site is a highly developed area close to other developed areas, albeit set within a much less developed wider landscape (and seascape). The facility in question is an unusual development, and a permission in this case would simply allow that development to continue for a further period. It is not clear whether the authority fears a further time-extension of the same development in two years’ time, but if so that is a matter that can clearly be considered on its merits and in the light of evidence at the time. If the authority fears that a precedent would be created for an “ordinary” wind farm at the site, different considerations would apply and, indeed, have already been applied in the case of the 13 turbines I have already mentioned as having been rejected here some time ago. I therefore do not consider that the authority’s third formal reason has any merit.

47. I take account of nature conservation interests, but the evidence suggests to me that, as with landscape and heritage interests, the appeal proposal would not cause any irreversible damage.

48. As I indicated in paragraph 4 above, my approach to this appeal is to consider the overall effect of granting a new planning permission, and that includes considering whether there would be unacceptable consequences from doing so. I have come to the overall conclusion on the main issues, also taking account of all the other matters raised, and subject to my remarks below about the conditions to be imposed, that unacceptable consequences would not flow from a new planning permission as sought. That tallies with officers' recommendations made on three separate occasions to the planning authority that permission should be granted.

49. Finally, I come to the conditions that should be imposed on the permission I am granting. As the application is in reality an application for a new permission, the new permission needs to include all relevant conditions. Although the conditions on the 2014 permission do not automatically continue into the new permission, the planning authority's suggested conditions for this case reflect very much those imposed within the 2014 permission. Bearing in mind Circular 4/1998, *The use of conditions in planning permissions*, I have consulted the main parties on what seemed to me to be inadequacies in some of the authority's suggested conditions. I have taken account of their responses on that. I have also made a number of other lesser changes to the authority's suggested conditions to reflect the circular.

50. Other conditions are suggested by third parties. One such suggestion is a condition requiring detailed research into low frequency sound emitted by the turbines and its relationship with people's health. However, the main parties criticise this on various grounds, and it seems to me that those criticisms are certainly valid with regard to the enforceability of such a condition, as it would require monitoring equipment to be installed on land outside the appellant's control. That would not accord with the circular. In the light of the submissions made I have also considered whether amplitude modulation needs to be monitored, but I accept the appellant's view that no complaints properly attributable to amplitude modulation are raised by local residents; such a condition is not suggested by the planning authority; and I do not impose one.

51. The community council complains that a number of the conditions of the previous permissions have not been monitored by the planning authority particularly, it seems, when breaches of noise conditions are alleged outside normal working hours. This is a matter for the authority, although some of the amendments I make to suggested conditions improve their enforceability.

52. Turning to the details, in its August 2017 response to the appeal, the planning authority suggested the imposition of 21 conditions in the event of a permission. I delete two of those (conditions 12 and 13 in the planning authority's initial list, relating to contaminated land) as either the planning authority or both main parties considered that they would be unnecessary. My conditions 1-11 reflect the planning authority's suggested

conditions 1-11 respectively, and my conditions 12-19 reflect the planning authority's suggested conditions 14-21 respectively.

53. I make a number of specific comments on those conditions as follows.

- My condition 1 provides for the new October 2019 end-date for turbine testing on the site, together with decommissioning arrangements like those required by the previous permissions.
- My conditions 2-7 inclusive and 9-18 inclusive reflect conditions in the authority's initial list, and those in the 2014 permission, with a number of changes which I have made to bring them into conformity with Circular 4/1998. In particular, I have taken account of the main parties' responses to my queries to them about the enforceability, completeness and/or precision of the conditions now numbered 6, 10 and 11. I have also amended conditions 6 and 9 to clarify the reporting of investigations after noise complaints.
- My condition 8 reflects the authority's suggestion for a change from the corresponding 2014 condition to substitute noise limits for "daytime hours" (0700-2300 hours on all days) for noise limits during less extensive "quiet waking hours". This reflects a concern raised by the community council.
- The origins of my condition 19 lie in a background noise survey which was carried out prior to the granting of the 2012 permission and was referred to in conditions in the 2012 and 2014 permissions. The main parties accept that background noise in the area is now reduced as a result of activity at the Hunterston Terminal having ceased and the decommissioning of the Hunterston A nuclear power station having been completed. During the course of 2017 the appellant carried out a new background noise survey in expectation that the planning authority would grant permission for the proposal now before me. Survey methods were agreed with the authority, and survey work was carried out and completed. My latest information is that data collection has been finalised, but data analysis is not complete. Condition 19 below provides for the early submission of the survey details and results to the planning authority and the substitution of those results, as indicated, for the earlier background noise survey data in the way other relevant conditions operate.

54. During the course of my correspondence with the main parties on conditions, the planning authority suggested that notification of the commencement of turbine operation under a new permission ought to be given. I agree, and my condition 20 provides for this, although not to the extent of the authority's wish for as much as two weeks' notice, which I regard as excessive.

55. My consideration of conditions has included the possibility, notwithstanding my previous remarks, that if satisfactory conditions cannot be framed, that itself would be a reason for refusing permission. But I have not found that to be the case.

Mike Croft

Reporter

Annex: conditions

1. The site shall be used as a facility for the testing at any given time of a maximum of 3 offshore wind turbines no later than 14 October 2019. The turbines and associated infrastructure shall be removed and the land restored to its former condition within 6 months of the cessation of testing, in accordance with a decommissioning method statement to be agreed in writing by the planning authority prior to the commencement of the development. If planning permission for the proposed multi-fuel power station at Hunterston is granted, the wind turbine test facility shall not be operational at the same time as the testing or operational phases of the multi-fuel power station. *[Reason: to restrict the development to the terms of its justification and to ensure satisfactory restoration of the site.]*
2. Prior to the commencement of the development the applicant shall submit for the written approval of the planning authority exact details of the siting, design and finishes to all ancillary buildings, temporary buildings and structures. Prior to the erection of each wind turbine the applicant shall submit for the written approval of the planning authority exact details of the siting, design and finish of the wind turbine. The siting, design and finishes of all those ancillary buildings, structures and turbines shall be in accordance with the approved details. *[Reason: in the interest of the amenity of the area.]*
3. All turbine components shall be transported to and removed from the site by sea by way of the existing jetty at the Marine Construction Yard. *[Reason: to minimise disruption on the road network.]*
4. Prior to the commencement of the development the applicant shall submit for the written approval of the planning authority a transport management plan which shall include the identification of the routes for delivery of construction materials to the site and times of day when the deliveries can be made. The plan shall be implemented in accordance with the approved details. *[Reason: to minimise disruption during peak traffic times and to local residents along the road network.]*
5. Prior to the commencement of the development hereby permitted the applicant shall submit for the written approval of the planning authority a construction method statement which shall detail measures to be put in place to avoid any materials or contaminants being released into the Portencross Site of Special Scientific Interest and which shall examine specific aspects of the development hereby permitted including piling for turbine base foundations, storage of fuel which may pose higher pollution risks, general on-site procedures for dealing with accidental pollution incidents. The construction method statement shall be provided at least two months prior to work commencing on site and the measures contained in the approved statement shall be implemented throughout the duration of the construction and operation of the site. *[Reason: to minimise harm to the Portencross Site of Special Scientific Interest.]*
6. At the reasonable request (referred to later in this condition as the “request”) of the planning authority or following a valid complaint to the planning authority relating to noise immissions (sounds heard by the observer) arising from the operation of the wind turbines at the site, the operator shall employ a suitably qualified acoustic consultant or other

competent person to measure the level of noise immission from the wind turbines to which the complaint relates. The measurement and calculation of noise levels shall be undertaken in accordance with pages 102-109 of *"The Assessment and Rating of Noise from Wind Farms"* (ETSU-R-97), including the type, classification and calibration of the measuring equipment, the location of the microphone, the relevant weather conditions and the analysis and presentation of the measured noise data, or such other method agreed in writing by the planning authority. Where the operation of the wind turbines, when assessed at any noise sensitive premises is likely to result in audible tones, the noise immission level shall be rated as detailed on pages 104-109 of *"The Assessment and Rating of Noise from Wind Farms"* (ETSU-R-97). Measurement of noise immissions shall be commenced within one month of a valid complaint being registered by the planning authority or within one month of the authority's request. Findings from this survey shall be reported to the complainant (if any) and to the planning authority within one month following completion of the survey, or within three months of the date of the complaint or the request, whichever is earlier, unless otherwise agreed in writing by the authority. *[Reason: to ensure that complaints are dealt with in accordance with a proper framework.]*

7. During night hours, defined in *"The Assessment and Rating of Noise from Wind Farms"* (ETSU-R-97) as 2300 to 0700 hours on all days, the wind turbine noise immission level at any property lawfully existing or with planning permission at the date of this permission shall not exceed the LA90, 10min levels (as detailed in Table 11.7 Night Time Noise Limits of the *"Hunterston National Off Shore Wind Turbine Test Facility Volume 1: Environmental Statement"*) or the measured existing LA90, 10min noise level (to be calculated from data measured from the Background Noise Survey referred to in *"Hunterston National Off Shore Wind Turbine Test Facility Volume 1: Environmental Statement"* plus 5dB(A), whichever is the greater. In the case of locations not included in Table 11.7, the limit for the nearest location listed shall apply. *[Reason: to minimise noise disturbance during the night.]*

8. During daytime hours, defined in *"The Assessment and Rating of Noise from Wind Farms"* (ETSU-R-97) as 0700 to 2300 hours on all days, the wind turbine noise immission level at any property lawfully existing or with planning permission at the date of this permission shall not exceed the ETSU-R-97 derived daytime noise limit of 35db LA90, 10min or the measured existing LA90, 10min noise level (as detailed in Table 11.4 Quiet Daytime Prevailing Background Noise Levels of the *"Hunterston National Offshore Wind Turbine Test Facility Volume 1: Environmental Statement"*) plus 5dB (A), whichever is the greater. In the case of locations not included in Table 11.4, the limit for the nearest location listed shall apply. *[Reason: to minimise noise disturbance during the day.]*

9. On receipt of any telephone complaint directly made to the 24 hour contact number supplied by the applicant, the applicant shall acknowledge receipt of the complaint to the complainant by telephone and shall notify the planning authority both of the complaint and of the acknowledgement, all within 72 hours of receipt of the complaint. On confirmation by the planning authority that a noise complaint (whether received directly by the planning authority or via the applicant) is valid, condition 6 shall apply. *[Reason: to ensure that noise complaints are dealt with in accordance with a proper framework.]*

10. In the event that the applicable noise limits are shown to be exceeded as a result of measurements required by condition 6, the operator of the turbines shall identify and implement mitigation to reduce the noise levels to no greater than those specified in the noise limits, in a timescale to be agreed in writing with the planning authority. A further noise survey in accordance with ETSU-R-97 shall be undertaken and submitted for approval within a period to be agreed in writing with the planning authority to demonstrate compliance with the noise limits. *[Reason: to ensure that noise complaints are followed by remedial action when necessary.]*

11. Not later than four weeks after each wind turbine commences operation following the grant of this permission, the operator shall employ a suitably qualified acoustic consultant or other competent person to record and measure the level of noise immission from the wind turbines at a minimum of four locations, to be agreed in writing with the planning authority prior to the commencement of such monitoring. The locations shall be as close as possible to noise monitoring locations presented in Figure 17.1 of the Environmental Statement, or those locations employed in the background noise survey. The measurement and calculation of noise levels shall be undertaken in accordance with pages 102-109 of “*The Assessment and Rating of Noise from Wind Farms*” (ETSU-R-97) including the type, classification and calibration of the measurement equipment, the location of the microphone, the relevant weather conditions and the analysis and presentation of the measured noise data, or such other method agreed in writing with the planning authority. Where the operation of the wind turbines, when assessed at any noise sensitive premises, is likely to result in audible tones, the noise immission level shall be rated as detailed in ETSU-R-97 pp 104-109. The findings from this survey shall be submitted for approval in writing by the planning authority within 4 weeks following completion of the survey, or within 3 months of the first date of operation, whichever is earlier, unless otherwise agreed in writing by the planning authority. In the event that the limits set out in conditions 7 and 8, and subject to the operation of condition 19, are not met the operator shall identify and implement such measures as are necessary to comply with the limit, as agreed in writing with the planning authority. *[Reason: to ensure that remedial action in relation to noise immissions is taken when necessary after the commissioning of each turbine.]*

12. Construction works likely to give rise to noise audible at the curtilage of any nearby noise-sensitive premises shall be carried out only during the following times: Mondays - Fridays (excluding public holidays) 0800-1800 hours and Saturdays 0800-1300 hours; plant, machinery and operating methods shall be selected and used in accordance with *BS 5228: Noise Control on Construction and Open Sites* and the Control of Pollution Act 1974. *[Reason: to minimise noise and vibration nuisance from construction works.]*

13. The toilets on the site shall be either (a) connected to the public mains sewerage system; or (b) prior to the commencement of the development the applicants shall submit for the written approval of the planning authority proposals to demonstrate how foul sewerage from the development can be disposed of without causing nuisance, and disposal of foul sewerage shall be in accordance with the approved details. *[Reason: to ensure satisfactory drainage arrangements for the toilets on the site.]*

14. All mitigation measures detailed in "*Hunterston National Off Shore Wind Turbine Test Facility Volume 1: Environmental Statement*" shall be implemented in accordance with the details described therein. *[Reason: in the interest of the amenity of the area.]*

15. Prior to the commencement of the development, the applicants shall submit a detailed emergency response plan to be approved in writing by the planning authority. The plan shall include details of all emergency planning requirements for the site during construction and operational phases and options for consultation meetings if required. The plan shall also provide details of plant location, heights and sizes, alerting and notification arrangements, muster points, shelter areas, emergency evacuation routes, arrangements with emergency services and emergency contact numbers etc. The plan shall be implemented in accordance with the approved details. *[Reason: in the interest of safety.]*

16. Before coming into use, the turbines and meteorological masts shall be fitted with 25 candela omni-directional red lighting or infrared lighting with an optimised flash pattern of 60 flashes per minute of 200 ms to 500 ms duration at the highest practicable point. *[Reason: in the interests of aviation safety.]*

17. All phases of construction shall take place outwith October to February inclusive. *[Reason: to minimise disturbance to wintering birds.]*

18. Prior to the commencement of the development the applicant shall submit a report to demonstrate any effects that turbulence might have on dust, and to mitigate any adverse effects, for the written approval of the planning authority. The approved mitigation measures shall be implemented prior to the operation of the wind turbines. *[Reason: in the interest of the amenity of the area.]*

19. Within 2 months of the date of this permission the operator shall submit details of, and results from, a revised background noise survey, conducted not more than 9 months earlier, and undertaken in accordance with "*The Assessment and Rating of Noise from Wind Farms*" (ETSU-R- 97) and "*A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise*" (Institute of Acoustics, 2013) to the planning authority. In the event that the background noise level in the revised background noise survey is different from the background noise level in the background noise survey referred to in "*Hunterston National Off Shore Wind Turbine Test Facility Volume 1: Environmental Statement*", the most recent levels shall be recorded as the background noise level for the purposes of conditions 7 and 8. *[Reason: to take account of changes in background noise levels since the earlier background noise survey was carried out.]*

20. The operator shall notify the planning authority, at least 24 hours in advance, of the date of first operation of any turbine hereby permitted. *[Reason: for the avoidance of doubt in relation to other conditions.]*