Directorate for Planning and Environmental Appeals

Summary of Report of Inquiry into Planning Application

The Scottish Government

• Case reference	AIR-CES-001
• Case type	Planning application
• Reporter	Trevor A Croft
• Date of application	1 April 2013
• Applicant	North Uist Development Company
• Planning authority	Comhairle nan Eilean Siar
• Other parties	Ministry of Defence
• Method of consideration and date	Hearing session 3 June 2014
• Date of report	9 September 2014
• Reporter's recommendation	Refuse planning permission

Ministers' Reasons for Call in:

1. The development's potential for interference to the range control radar(s) on South Uist and St Kilda.

The Site:

2. The application site is located just to the north of the A867 Lochmaddy to Clachan road on North Uist, close to the junction with the B894 Locheport township road, about a kilometre north-east of Clachan. The site is situated in a moorland area comprising rough grazing, forming part of the crofting common grazing, on the north-east flank of Criongrabhal, a small hill rising to 39 metres above ordnance datum, standing just to the north of the main road. The site is at a level of 20 metres AOD.

Description of the Development:

3. The development would consist of two Enercon E-44 wind turbines, with a height of 77 metres to blade tip, together with associated foundations, access road works including upgrading of existing access road, underground cables, electrical plant enclosures and crane hard standings. It would have an operational lifespan of 25 years.

The Ministry of Defence's case:

4. The proposed turbines would create images on the screens of the air Watchman radar, based on St Kilda, that is used to control the air and sea space covered by the danger areas, and facilitate the missile and other testing carried out at the Hebrides range.

5. These images cause desensitisation of the radar screen around them and can be mistaken for moving aircraft. Operators have to act very quickly in assessing what is happening on their screens, with safety at the forefront of their considerations.

6. Planning of operations at the range takes place several months ahead. If a problem arises during a test through an unauthorised incursion into the danger area a test could have to be shut down. As well as causing logistical problems it also affects the reputation of the range as being able to deliver a service, and this could affect its long term viability.

7. The false image of an aircraft created by a wind turbine could be taken as an aerial object about to enter the danger zone. A certain number of turbines can be accepted, as evidenced by the number already constructed in the Uists, including a number of large ones. There comes a point however when additional turbines cause problems that become unmanageable by the radar operators. When this point is reached the Ministry will, reluctantly object to a proposed turbine development.

8. The occasions when this happens depend on individual circumstances. These include not only the type and number of turbines, but factors such as terrain and buildings that can also affect the radar images. It is not therefore possible to assess in advance what the impact would be in any specific case.

9. The Ministry is optimistic of developing the growth in range activities bringing additional business to the area. It already supports around 100 full time posts and is creating new apprenticeships. It is the second largest employer in the Uists, after the Comhairle. Its benefit to the local community should not be underestimated.

10. The Ministry has assessed possible mitigation measures for the proposed turbines but none has been found that would be acceptable.

The applicant's case:

11. The North Uist Development Company was formed in 2010 to promote the social, educational, cultural, economic and environmental well-being of the residents of North Uist. It is promoting the turbine development to provide significant income for development projects in the area over the 25 year lifetime of the development. It has estimated profits of between £5.4 and £6 million over the first 20 years, although these figures may now be significantly reduced because of reductions in the feed in tariff. These funds would be invested for the benefit of the local community.

12. With the withdrawal of the objection regarding the air defence radar the only issue is the impact of the turbines on the Hebrides range radar. It is acknowledged that the turbines would cause images on the radar screens. The applicant disputes that these would cause unacceptable problems.

13. Its expert witness, a highly experienced senior naval air traffic controller, says he has never known a situation where a radar operator had mistaken a wind turbine for a moving target. Screen clutter is a known effect that comes from a number of sources, including ground traffic. It can be assessed by an operator and is not seen as a safety problem.

14. Operators do not offer an air traffic control service other than for military or other aircraft involved in missile testing operations, and then only within designated danger areas. Aircraft are free to overfly the danger area above its designated height, but there is no communication between controllers and these aircraft.

15. The key issue is whether the radar operators would be able to handle the effects of clutter caused by the images of the wind turbines on the radar screens. The turbines are located within danger area D701E, which covers a primarily

landward area on Benbecula and South Uist, unlike the rest of the danger areas that cover the sea area likely to be involved in range testing. As the D701E has not been activated for up to 30 years it is not seen as essential for range operations or safety.

16. Radar operators are already able to manage radar clutter on screens. The Ministry has acknowledged that the likelihood of an incident is extremely small. The applicant considers the proposal accords with the development plan and that the benefits that would arise for the community justify the granting of planning permission.

The Comhairle's Case:

17. The Comhairle's considers that the Ministry has not demonstrated that the development would cause an unacceptable adverse impact on defence.

18. The Ministry's change of attitude in withdrawing its objection to the air defence radar highlights weaknesses in its position as to the availability and effectiveness of potential mitigation systems in addressing any adverse impacts the turbines may have on radar operating systems. This undermined the Ministry's position in respect of the objection.

19. There is evidence that turbines can have a detrimental effect on the range control radars, but the Ministry has not demonstrated the technical reasons why two turbines sited at a distance well outwith the active Hebrides range danger area would have a detrimental effect to the degree that it would be unmanageable.

20. The operational impact from the clutter on the radar screen and the effect on operators is the key issue. Expert consultants do not accept that this impact would be unacceptable. The Comhairle accepts this view. As a result it concludes that the development is not contrary to the development plan, and therefore complies with it.

21. Other material planning considerations include socio-economic and environmental benefits that would arise from the development justify the granting of planning permission.

Reporter's reasoning:

<u>Assessment against the provisions of the development plan</u>

22. Overall, the proposal would not be consistent with the policies of the local development plan. The key relevant policy is 19 Energy Resources. This supports proposals contributing to meeting the targets of the (then) National Planning Framework 2, the Climate Change Act and the National Renewables Infrastructure Plan. Proposals must, however, be able to demonstrate they would have no unacceptable adverse impact on, amongst other things, defence systems.

23. The Ministry of Defence has stated that the proposed development would impact on the Hebrides range control radar in a manner that is unmanageable. This is because of the impact that the image of the proposed turbines would have on the radar screens. They would create clutter and desensitize the screen. This would make it difficult for operators to manage the images and aerial objects could be hidden from view.

24. The potential consequence of this is an incident causing the shutdown of range operations or, in a worst case, an aerial collision. The former would have serious implications for the reputation of the range, when test firings can take months to set up. The latter could have very serious consequences, including potential loss of life.

Assessment against other material considerations

25. The purpose of the proposed development is to provide funds to the North Uist Development Company for the general social and economic benefit of the North Uist area. Over a 20 year period the profits would generate of the order of £5 million to the local economy. This would help restrict depopulation and improve the livelihood of the people of the area.

26. I attach considerable weight to this, as the area has suffered depopulation and local services have been closed, leading to a downward spiral that could hopefully be reversed if the proposed turbines are allowed.

Final conclusions

27. In this case I am unable to accept the view of the Comhairle that the proposed development is in accordance with the development plan, because of the adverse impacts of the proposal on defence interests. The benefits of the proposal to the local community are a material consideration that should not be dismissed lightly. Despite this I accept that the impact of the proposed turbines on the radar screens makes the situation unmanageable, and therefore unacceptable to the Ministry of Defence. There remains the possibility, however remote, at worst of a mid-air collision due to images of airborne objects being concealed on the radar screens. Ultimately I attach greater weight to this than the undoubted benefits that would accrue from the development.

28. I recommend that planning permission be refused.

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File reference: AIR-CES-001

9 September 2014

The Scottish Ministers
Edinburgh

Ministers

1. In accordance with my minute of appointment dated 24 February 2014, I conducted a public hearing and site inspections in connection with an application for planning permission. I now submit my report on that application.

2. The application was submitted by North Uist Development Company on 1 April 2013, and the proposed development was the subject of an environmental assessment. The development would consist of two Enercon E-44 wind turbines, with a height of 77 metres to blade tip, together with associated foundations, access road works including upgrading of existing access road, underground cables, electrical plant enclosures and crane hard standings.

3. The Ministry of Defence objected to the proposed development on grounds relating to the impact on air defence radar systems on North Uist and on the control radar systems on St Kilda and South Uist for the Hebrides missile range. On 19 November 2013 the Comhairle's Environment and Protective Services Committee agreed to approve the application on socio-economic grounds and because the Ministry of Defence had not demonstrated to its satisfaction that the development would have an adverse impact on defence. Ministers were subsequently notified, in correspondence concluding on 25 November 2013, of the decision.

4. On 9 December 2013 the Ministry of Defence notified Scottish Government officials it was withdrawing its objection relating to air defence radar. On 18 December 2013 Ministers directed they would determine the application in view of the development's potential for interference to the range control radar(s) on South Uist and St Kilda. On 24 February 2014 I was appointed to hold a hearing and report to them in connection with the application.

5. On 2 June 2013, by arrangement with parties, I made an accompanied visit to the range headquarters on South Uist where the radar systems were demonstrated.

The following day, 3 June, I held a public hearing at An Caladh, Balivanich, which was followed by further accompanied site inspections on North Uist. A list of those giving evidence at the hearing is provided in Appendix 2.

6. To avoid a repetition of evidence called in applications for proposed turbines at Dark Island Hotel, Benbecula, and 7 Bornish, South Uist were also considered at the hearing. The three applications are not directly related and each was discussed separately, and is the subject of a separate report to Ministers.

7. I have taken account of all the documentation submitted with the application, including environmental information. Copies of all the documentation and correspondence are available on the case file.

8. It should be noted that concurrently with my early consideration of the case the Ministry of Defence challenged in the Court of Session a decision by the Comhairle to grant three planning applications for small wind turbine developments on South Uist. After the hearing the outcome of the challenge was that the permissions were overturned by the court. I made a further information request seeking views on the relevance of this decision, if any, to the cases before me. All parties agreed it had no relevance, and I accept these views.

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Note: References to the Ministry in this report are to the Ministry of Defence.

1. BACKGROUND

1.1 The application is for the development of two Enercon E-44 wind turbines, with a height of 77 metres to blade tip, rated at 900 kilowatts, together with associated foundations, access road works including upgrading of existing access road, underground cables, electrical plant enclosures and crane hard standings. Access would be via an existing track, extended and upgraded.

1.2 The application site is located just to the north of the A867 Lochmaddy to Clachan road on North Uist, close to the junction with the B894 Locheport township road, about a kilometre north-east of Clachan. The site is situated in a moorland area comprising rough grazing, forming part of the crofting common grazing, on the north-east flank of Criongrabhal, a small hill rising to 39 metres above ordnance datum, standing just to the north of the main road. The site is at a level of 20 metres AOD. The operational lifespan of the development would be 25 years after which time it would be decommissioned and above ground facilities removed.

1.3 The site, covering 8.9 hectares, lies within the Boggy Moorland Landscape Character Type within the Western Isles Landscape Assessment. It is visually unremarkable. There are no designations affecting the site, although it is close to the Mointeach Scadabhaigh Special Protection Area.

1.4 The proposed development is Schedule 2 Development – Category: 3(i) in terms of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. Having assessed the characteristics and location of the development and the characteristics of the potential impact as set out in Schedule 3 to the Regulations, the Comhairle issued a screening opinion 4 July 2012 stating that in its opinion the proposed development was not considered likely to have a significant impact. The submission of an environmental statement was not therefore required. I have no reason to differ from this view.

1.5 The screening opinion also stated that information would be required on the impact on birds, archaeology, and a landscape and visual impact assessment. These were provided with the application.

1.6 In the committee report Comhairle officials did not identify any issues of concern that could not be dealt by conditions, other than those relating to the air defence radar at South Clettraval on North Uist, and the Hebrides missile range control radars on South Uist and St Kilda. The report recommended refusal of the application because of the unacceptable interference with both air defence and range control radars, and therefore being contrary to part (b) of policy 19, Energy Resources, Development Criteria Policies DC2, 3, 5 and 6, of the Outer Hebrides Local Development Plan, and policy 1 of the supplementary guidance for wind energy development, also part of the local development plan.

1.7 On 19 November 2013 the Comhairle's Environment and Protective Services Committee agreed to approve the application on socio-economic grounds and because it considered the Ministry of Defence had not demonstrated to its

satisfaction that the development would have an adverse impact on defence. Ministers were subsequently notified, in correspondence concluding on 25 November 2013, of the decision.

1.8. On 9 December 2013 the Ministry of Defence notified Scottish Government officials it was withdrawing its objection relating to air defence radar. The objection regarding the potential unacceptable impact on the range radars still stands. As the application has been called for their own determination, however, Ministers must address the application as a whole.

1.9 It should also be noted that Ministers have before them called in applications for a proposed turbine at the Dark Island Hotel, Benbecula, and two turbines and associated development at 7 Bornish, South Uist. The three applications are not directly related and each is the subject of a separate report to Ministers.

2. LEGISLATIVE FRAMEWORK AND PLANNING POLICY CONTEXT

National Planning Framework

2.1 Section 3A of the Town and Country Planning (Scotland) Act 1997 (as amended) makes provision for a National Planning Framework (NPF) to set out in broad terms how the Scottish Ministers consider that the development and use of land should occur. National Planning Framework 3 was published in June 2014 after the public hearing. It gives general support for renewable energy development. It is not sufficiently different in this regard from NPF 2 as to require me to consult parties about any change of impact on the development proposal. Paragraph 3.8 sets a target of generating the equivalent of 100% of gross electricity consumption by 2020, with an interim target of 50% by 2015.

2.2 Paragraph 3.24 emphasises the lasting impact of community ownership of onshore wind generating facilities on rural Scotland, building business and community resilience and providing alternative sources of income.

Scottish Planning Policy

2.3 Scottish Planning Policy sets out national planning policies which reflect Scottish Ministers' priorities for the planning system and development and use of land. As a statement of Ministers' priorities it carries significant weight, although it is for the decision maker to determine the weight in each case (paragraph iii). The latest version was published in June 2014, after the public hearing was held. Although there are some changes the broad policy on renewable energy is not, as with NPF 3, sufficiently different to require me to consult parties about its impact on the proposal.

2.4 The latest version says clearly at paragraph 152 that planning must facilitate the transition to a low carbon economy. It repeats the targets set out in NPF 3. It is left to local development plans to set out spatial frameworks identifying areas likely to be most appropriate for onshore wind development.

2.5 Paragraph 169 sets out considerations likely to be included in considering proposals, according to the scale of development and area characteristics. Amongst other things these will include impacts on defence interests.

Online advice

2.6 Further guidance is contained in the Scottish Government's online advice on Onshore Wind Turbines which was last updated on 12 December 2013. The online advice provides guidance to local planning authorities in determining onshore wind turbine applications. The online advice highlights "Aviation Matters" and "Military Aviation and Other Defence Matters" as typical planning considerations for local authorities in determining planning applications for wind farms.

2.7 In respect of Aviation Matters, the online advice states that: "UK Airspace is important for both civilian and military aviation interests. It is essential that the safety of UK aerodromes, aircraft and airspace is not adversely affected by new wind power infrastructure. …….Depending on the wind turbine and anemometers' size, shape, construction materials and location, together with the amount of electromagnetic interference, there may be implications for airport radar and communications systems."

2.8 In respect of Military Aviation and Other Defence Matters, the online advice states: "….military aviation may be over extensive areas of the UK in airspace outside 'controlled airspace'. …..The Ministry also operates Air Defence Radars and Meteorological radars which have wide coverage over the UK (onshore and offshore). It is important that new energy infrastructure does not significantly impede or compromise the safe and effective use of any defence assets……"

Aviation guidance

2.9 Scottish Government advice note providing Guidance on Dealing with Aviation Objections and Associated Negative Conditions on Wind Turbine Consents (23 January 2012) states that developers should initiate the process of identifying or developing a solution. It says that the use of mitigation conditions where there is no identified mitigation to deal with an aviation objection could have an impact on the likelihood of other developments being consented.

The development plan

2.10 Section 25 of the Town and Country Planning (Scotland) Act 1997 states that in making any determination under the planning Acts this is to be made in accordance with the development plan, unless material considerations indicate otherwise. In the case the development plan comprises the Outer Hebrides Local Development Plan, adopted November 2012.

2.11 The plan's vision is: "to enable realistic economic growth and help facilitate strong thriving communities".

2.12 The objectives are to make the islands:

- A good place to live with a range of housing, supported by accessible services and facilities.
- A successful place for working in with a supportive planning framework, including well connected infrastructure to encourage long term economic regeneration and growth.
- An attractive place enjoyed by residents and visitors where our outstanding natural, built and cultural heritage is valued.

2.13 Policy 1 – Development Strategy states:

Development proposals outwith settlement areas will be assessed against all of the following:

a) a clearly justified and demonstrated need for the proposed development at a specific location;
b) the capacity of the surrounding landscape to accommodate the development;
c) sensitive siting, scale and design to minimise impact on the open and rural character of the landscape, avoiding raised or high level locations to minimise visual impact; (supplementary information including siting, levels, height of proposed buildings and materials will be required at Planning Permission in Principle application stage as well as detailed planning stage);
d) the design, materials and finish of the access and parking is appropriate to the rural setting and hard-landscaping is kept to a minimum;
e) the overall layout and design respects and, where possible, retains any archaeological, heritage or landscape features of the site.

2.14 Policy 19: Energy Resources states:

The Comhairle will support proposals that contribute to meeting the targets and objectives of the National Planning Framework 2, the Climate Change Act, and the National Renewables Infrastructure Plan in relation to electricity grid reinforcement, infrastructure and renewable energy generation.

Proposals for onshore renewable energy projects and oil and gas operations (including extensions to existing or proposed developments and land based infrastructure associated with offshore projects) will be assessed against the details below and be required to demonstrate all the following:

a) appropriate location, siting and design including the technical rationale for the choice of site;
b) no unacceptable adverse impact (including cumulative) on: landscape, townscape and visual aspects; natural, built and cultural heritage resources; the water environment; peatlands; aviation, defence and telecommunications transmitting and receiving systems, e.g., broadband; public health and safety, and amenity (including noise and shadow flicker as appropriate); neighbouring land uses, transport management and core paths;
c) acceptable decommissioning and site reinstatement arrangements;
d) phasing arrangements, where appropriate;
e) the contribution towards meeting national energy supply targets and local economic impact.
f) where appropriate, compliance with the supplementary guidance prepared for Wind Energy Development, which the Comhairle will adopt as statutory Supplementary Guidance as part of the Development Plan.

The type, scale and size of the proposed development will have a significant effect on the way the Comhairle will consider an application and the level of accompanying information that will be required. Conditions and, where necessary, a planning agreement may be used to control the detail of the development. Non-permanent elements of a development will be granted permission consistent with their lifespan and/or projected period of use."

2.15 Policy 34 - Archaeology

Proposals that seek to protect, enhance and interpret nationally important monuments and other archaeological sites will generally be supported in line with the policy criteria. Development proposals adversely affecting nationally important remains and their settings will not normally be permitted.

2.16 The statutory Supplementary Guidance for Wind Energy Development was adopted with the local development plan, and thus forms part of the development plan. It states:

Wind Energy Resource

2.17 Scotland is well placed to take advantage of wind, wave and tidal power and the Scottish Government and the Comhairle recognise the substantial economic advantage that exists within this unharnessed resource. Although biomass and marine technologies are anticipated to make a major contribution to renewable energy targets in the long term, onshore wind will be the focus for meeting near term targets, due to the widespread resource and maturity of technology. Rural areas have considerable potential to contribute to the development of this energy economy and the Outer Hebrides are uniquely positioned, with some of the best wind energy resources. The overwhelming majority of the Outer Hebrides area has a wind speed of 8 m/s or greater. In general, a lower limit of 7 m/s is quoted as a current technical and economic requirement for commercial wind farm developments.

2.18 Turbines over 50 metres to the hub height are classified as a large scale wind farm development and must be assessed against the following:

- Policy 19 Energy Resource
- Supplementary Guidance Policy 1: Large scale development;
- Spatial Strategy policies (SP1 - 3); and
- Development Criteria policies (DC1 - 9).

Spatial Strategy Policies

2.19 Policy 1 – Broad Areas of Search

Spatial Policy Map 1 identifies the primary locations (i.e. *broad areas of search)* which are more likely to be acceptable, in principle, for large-scale wind energy subject to assessment against the Development Criteria in this guidance; the development plan; and relevant national / international guidance. Areas within the identified *broad areas of search* which have particular sensitivity to aviation and defence radar operations are highlighted in Spatial Policy Map 1 as *aviation and defence consultation zones.* Large-scale wind energy developments may be possible in these zones, however, developers must enter into consultation with the relevant interests at an early stage as these zones are heavily dependent on line-of-sight issues with regard to the wind farm being visible to radar antenna.

Development within these areas may not be supported if aviation and defence resources are likely to be adversely affected by the proposed wind farm.

2.20 Policy 2 – Areas of Potential Constraint

Areas of potential constraint have been identified in Map 2 and in recognition of the sensitivity of these resources to wind energy developments over 5 megawatts, the Comhairle recommends that this scale of development is steered away from these locations unless the proposals are satisfactorily assessed against the following factors in order to enable development to take place:

- no detrimental impact on Conservation Areas; Scheduled Ancient Monuments; Listed Buildings;
- suitable location in relation to Areas of Low Landscape Capacity (for Onshore Wind Energy Developments);
- no detrimental impact on Aviation and MoD Consultation Zones; proposals lie outwith 1.5 kilometres of settlements. Turbines associated with proposals over 5 megawatts should be located at a distance of at least 1.5 kilometres from settlements where they are likely to be a prominent feature in an open landscape. Within this distance, applications of this scale will continue to be judged on a case-by-case basis. Developments over 5 megawatts may be possible but are less likely in these areas. Any application will be subject to assessment against the Development Criteria in this guidance; the development plan; and relevant national / international guidance. It is likely that such an application would require significant levels of supporting information.

2.21 Policy 3 – Areas of Significant Protection

In recognition of the strength of protection afforded to them by law and the sensitivity of these resources to wind farm developments over 5 megawatts, internationally and nationally designated natural heritage resources, as outlined in Map 3, are identified as areas to be afforded *significant protection*. It is unlikely that wind energy development of capacity greater than 5 megawatts or over 50 metres in height will be acceptable within such areas.

Development Criteria Policies

2.22 Policy 1 Natural Heritage

Developers will be expected to demonstrate, through an appropriate assessment, that wind energy proposals (and associated infrastructure) will not have an adverse effect on the overall integrity of the site of any international designation, unless there are no alternative solutions and there are imperative reasons of overriding public interest for doing so. These designations are:

- Ramsar Sites;
- Natura 2000 sites (Special Protection Areas and Special Areas of Conservation).

Developers will be expected to demonstrate that wind energy proposals (and associated infrastructure) will not compromise the underlying objective and overall integrity of national designations unless it can be evidenced that any significant adverse effects are clearly outweighed by social or economic national benefit that could come from the development. These designations are:

- National Scenic Areas*;
- Sites of Special Scientific Interest;
- National Nature Reserves.

In respect of the animals and plants identified in Annex 4 of the Habitats Directive (European Protected Species), developers will be expected to demonstrate that wind energy proposals (including associated infrastructure) will not have an adverse effect on these species, or that all three tests as detailed in Regulation 44 of the Habitats Regulations can be satisfied. In addition, the Comhairle will give due consideration to the wider natural heritage beyond the confines of designated sites, particularly those listed below, where they are of major importance or contribute to the coherence of the Natura network of European sites:

- Areas of habitats listed in Annex 1 and the habitats of species of community interest listed in Annexes 2,4 and 5 of the Habitats Directive;
- Areas which support habitats of naturally occurring wild birds, particularly those on Annex 1 of the Birds Directive and migratory species.

Proposals likely to have an unacceptable adverse impact on species listed in Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended) will not be acceptable.

**SNH have published Special Qualities Reports for National Scenic Areas that should be referred to where proposals may affect National Scenic Areas*

2.23 Policy 2 - Landscape and Visual

Developers will be expected to demonstrate that wind energy proposals and associated infrastructure will not have an unacceptable significant visual or landscape impact on the character of the Outer Hebrides (including cumulative). Developers should seek to ensure that through good siting and design, landscape and visual impacts are limited. The nature of visibility of the proposal will be assessed their likely impact on:

- the special qualities of National Scenic Areas;
- residential properties and settlements;
- views from popular public viewpoints, transport routes, the core path network and recognised visitor locations;
- the site and setting of Scheduled ancient monuments; Listed Buildings; Conservation Areas; and other historic sites as agreed with the Comhairle.

In line with the policy SP2, turbines associated with proposals over 5 megawatts should be located at a distance of at least 1.5 kilometres from settlements. For smaller developments applications will be judged on a case-by-case basis.
Power lines connecting the individual turbines to the on-site sub-station are required to be underground and those connecting the wind farm sub-station to the electricity distribution system will require sensitive treatment.

The *Landscape Capacity Study for Onshore Wind Energy Development in the Western Isles, 2004* provides detailed information.

2.24 Policy 3 - Community Amenity

Planning applications must be accompanied by evidence that the proposals have been assessed and found to have no unacceptable significant adverse impact on community amenity in relation to the following:

- shadow flicker;
- noise;
- electromagnetic interference;
- commissioning and decommissioning;
- phasing;
- ancillary developments and infrastructure;
- public access;
- cumulative impacts of the above.

In the consideration of wind energy proposals, the Comhairle will seek to maintain and improve public access and enjoyment, in line with Local Development Plan Policies 24 and 25 in relation to countryside access and open space provision. With regards to shadow flicker and as per Scottish Government advice, turbines should be located at least a minimum distance equivalent to 10 times the blade diameter from any regularly occupied buildings not associated with the development and at least a minimum distance equivalent to the height of the turbine to blade tip plus 10% from public roads or paths identified in the Outer Hebrides Core Paths Plan. Planning conditions or obligations may set appropriate conditions, such as: noise levels; traffic management plans; commissioning and decommissioning arrangements and correction of any electro-magnetic interference.

2.25 Policy 4 – Water Resources

Proposals for wind energy developments (and associated infrastructure) will be required to accord with Local Development Plan Policy 9 relating to water quality for ground water, surface water (including water supply) and aquatic ecosystems. It should be demonstrated that the proposal has been designed to minimise any detrimental impact on the water environment. The carrying out of mitigating work may be the subject of a planning condition or agreement.

2.26 Policy 5 - Historic Resources

The implications for archaeological remains, built remains, historic landscapes, the historic character and associations of the wider landscape will be major factors in the consideration of proposals for wind energy developments (and associated infrastructure).

The requirements of Local Development Plan Policies 31 Listed Buildings; 32 Conservation Areas; 33 Thatched Buildings and 34 Archaeology will apply. Developers will also be expected to demonstrate that wind energy proposals and

associated infrastructure will have no unacceptable significant adverse impact on the site, context and setting of historic environment assets*; including designated and significant undesignated assets and areas.
As part of the process of preparing an Environmental Statement developers are required to adequately consider direct and indirect physical impact and detail any potential for cumulative effects on historic environment assets, their setting and visual amenity and the impacts of any secondary developments such as power lines or transmission stations.
**Historic environment assets are defined as: those identified in the Development Plan and /or in national listings, schedules or registers held by Historic Scotland or other competent authorities, including: conservation areas; listed buildings; historic gardens and designed landscapes; thatched buildings; sites and settings of SAMs and other unscheduled assets and areas of archaeological significance*.

2.27 Policy 6 - Aviation and Defence

Developers will be expected to demonstrate that wind energy proposals (and associated infrastructure) will not affect the safe use of: airport, defence or emergency service operation. This includes flight activity; navigation and surveillance systems; and associated infrastructure.

Full consultation with the Civil Aviation Authority, Highlands & Islands Airports Limited; the Ministry of Defence; National Air Traffic Services; Her Majesty's Coast Guard and the Comhairle should take place at the relevant stages.
When designing and siting proposals developers should pay particular regard to:

- MoD 'Safeguarding Extents Hebrides';
- Health & Safety Executive Safeguarding Zones;
- NATS En Route Plc Safeguarding Maps2;
- Department of Trade and Industry "Wind Energy and Aviation Interest – Interim Guidance";
- CAP 764 - CAA Policy and Guidelines on Wind Turbines; Civil Aviation Authority July 2011;
- CAP 393 – Air Navigation: The Order and the Regulations Civil Aviation Authority April 2010;
- CAP 670 – Air Traffic Services Requirements Part B Gen 01 Wind Farms Civil Aviation Authority February 2010.

2.28 Policy 7 - Cumulative Impact

Developers will be expected to demonstrate that proposals will not result in unacceptable cumulative impacts. Developers should refer to SNH's guidance 'Assessing the Cumulative Impact of Onshore Wind Energy Developments 2012'.
As cumulative issues only arise when the siting of a particular development is known, cumulative impact will be fully evaluated on a case-by-case basis. Assessment of impacts will take into account a wide range of factors covering the natural and built environment, landscape, the visual amenity of residents and the wider socio-economic impacts.

The Comhairle will encourage developers to co-operate over the exchange of information where cumulative assessment has been identified as important and is required in order to make decisions on proposals.

2.29 Policy 8 - Soil Resources

Proposals will be required to adhere to Local Development Plan Policy 10 relating to soil resources. For developments over 5 megawatts or 30 metres developers will also be expected to provide geotechnical and hydrological, ecological and peat management information in support of applications, identifying the presence of peat at each site and how the development is designed to avoid the disturbance of peat, including the risk of landslide connected to any development work. (Further guidance is provided in the Scottish Government's *Peat Landslide Hazard and Risk Assessment Guide*, 2007). The carrying out of mitigating work may be the subject of a planning condition or agreement.

2.30 Policy 9 - Planning Obligations

Both medium and large scale wind energy developments (as a general rule, those with three or more turbines each generating greater than 50 kilowatts or a development generating 1 megawatt or more) will normally be subject to a requirement for the completion of an agreement under section 75 of the Town and Country Planning (Scotland) Act 1997 to include:

- Land restoration during and after completion of the development phase and at any time when any part of the development is modified or becomes redundant and the taking out of a reinstatement bond to ensure acceptable restoration;
- Off-site works to roads or other services that reasonably require improvements to accommodate the proposed development. Any safeguarding or remediation works to any off site feature or receptor that may be affected by the proposal.

A decommissioning statement will be required to be submitted in support of a planning application, which should be updated at least 1 year before the cessation of generation at the site. This statement should be written in accordance with best practice and in consultation with Comhairle nan Eilean Siar. The statement should provide a detailed account of the necessary works and the method of reinstatement of the site, with the removal of all wind turbines, foundations, tracks (where appropriate), equipment and any ancillary plant associated with the development.

Applicants will have to demonstrate to the Comhairle that appropriate funding (must detail whether estimated cost is current or future) is in place to undertake this future work. Details of the mechanisms for the restoration of the site should be made in the case of a planning agreement.

3. CONSULTATION RESPONSES

External

3.1 **Atkins Global** said the proposal has been examined in relation to UHF Radio Scanning Telemetry communications used by its client in that region and there is no objection to the proposal.

3.2 **Connected Communities** and the **Joint Radio Company** said this proposal is cleared with respect to radio link infrastructure operated by: Scottish Hydro (Scottish & Southern Energy) and Scotia Gas Networks. An earlier objection in February 2012 in respect of this development is now withdrawn, with the agreement of Scottish Hydro, subject to the turbine positions and dimensions as proposed.

3.3 **Highlands and Islands Airports Limited** required red obstacle lights to be fitted at the hub height of the turbines. Provided that this condition is met, and National Air Traffic Services have no issues, then there would not be any objection to this proposal. If additional turbines are proposed further analysis would be required before Highlands and Islands Airports Limited could consent to these, due a possible cumulative effect on the navigation aids and missed approach procedures.

3.4 **Historic Scotland** noted the following:

- Barpa Langass (Scheduled monument Index No. 892) is a well preserved Hebridean chambered tomb, the monument is situated on the north-west slope of Ben Langass at about 45 metres AOD. The cairn is circular 24 metres in diameter and stands over 4 metres in height. It is north-east of the turbines and the photomontage (VP 1) shows both turbines fully visible at a distance of 2.4 kilometres. The LVIA considers that the impact on the monument is moderate.
- Sornach Coir'Fhinn (Scheduled monument Index No. 5125) stone circle 350 metres south of Ben Langass, (also known as Pobull Fhinn). It comprises 24 upright stones and boulders and is 37 metres east-west by 30 metres north-south. Situated on the southern slopes of Ben Langass, it commands a wide open prospect from the south-east through south and west to north-west. The stone circle is located to the east of the turbines and the photomontage (VP 2) shows both turbines fully visible at a distance of 2.8 kilometres. The LVIA considers that the impact on the monument is moderate.
- Sornach a'Phobuill (Scheduled monument Index No. 5245) stone circle comprising a large circle of small standing stones on a gently sloping hillside above Loch a'Phobuill. The stone circle is located to the south-east of the turbines and the photomontage (VP 3) shows both turbines fully visible at a distance of 2.2 kilometres. The LVIA considers that the impact on the monument is minor, due in part to low visitor numbers and difficulty in accessing the site.
- Leacach an Tigh Cloiche(Scheduled monument Index No. 5881) chambered cairn, standing stone and house comprising a prehistoric chambered burial cairn which was later re-used in the Iron Age as a dwelling-place. Situated on the south-west flank of Uneval, the monument is located to the north-west of

the turbines and the photomontage (VP 7) shows both turbines fully visible at a distance of 2.1 kilometres. The LVIA considers that the impact on the monument is minor, due in part to low visitor numbers and difficulty in accessing the site.

3.5 Historic Scotland did not agree with the statement that because monuments are not 'actively promoted to the wider public' that they are therefore 'less immediately sensitive to the visual impact of this development'. Managing Change in the Historic Environment setting guidance (2010) advises that that monuments have a setting, whether visited or not. These monuments are visited - particularly Barpa Langass, chambered cairn. Also it was not accepted that the impact on the setting of a monument is lessened by any accessibility issues.

3.6 The landscape where the turbines would be located is devoid of modern large scale development and the topography means that they will be visible over large distances. The turbines would be located in the centre of a number of scheduled monuments, many of which can be considered to have wide landscape settings where views both from and towards them are important. Potential intervisibility between these monuments may also be affected by such a development in this location.

3.7 It was therefore concluded that there will be an adverse impact on the setting of the monuments. In a finely balanced judgement, while these impacts are not of such a level of significance to warrant an objection to the development proposal for historic environment interests, the Comhairle is asked to consider the advice in reaching a decision on the proposal, and whether any mitigation is possible that might reduce these impacts. This could include a further reduction in turbine height.

3.8 **The Ministry of Defence** said the turbines would be detectable by and cause unacceptable interference to the range control radar at South Uist and the radar on St Kilda. Wind turbines have been shown to have a detrimental effect on these radars including desensitisation in the vicinity of the turbines and the creation of 'false' aircraft returns which air traffic controllers must treat as real. Controllers use the radar to separate monitor and control authorised and unauthorised aircraft in busy uncontrolled airspace in and around Ministry sites. Radar is the only way to do this safely. Maintaining a situational awareness of all aircraft movements within the airspace is crucial to air safety and the integrity of the radar is central to this process. The creation of 'false' aircraft returns could result in testing operations being suspended unnecessarily. Real aircraft returns could also be obscured by the turbines' radar returns, making the detection of unauthorised traffic much more difficult.

3.9 The Ministry also objected on grounds concerning the impact of the proposed turbines on the air defence radar at South Clettraval on North Uist. This objection was subsequently withdrawn, on 9 December 2013, after the Comhairle's decision to approve the application.

3.10 **National Air Traffic Services** had no objection to the proposal.

3.11 **Scottish Environment Protection Agency** agreed that an Environmental Impact Assessment is not required insofar as its remit was concerned. It also advised that it did not need to be consulted further as reference should be made to its standing advice for planning authorities on small scale local development management consultations. Appendix 1 of this document provides standing advice for wind turbine developments below 10 megawatts. General advice on all scales of windfarm development could also be found in the energy section of the SEPA website, along with details of regulatory requirements and good practice advice for the applicant.

3.12 **Scottish Natural Heritage** said the proposed site lies close to Mointeach Scadabhaigh Special Protection Area classified for its black-throated divers and red-throated divers. The site's status means that the requirements of either the Conservation (Natural Habitats, &c.) Regulations 1994 as amended, (the "Habitats Regulations") apply, or (for reserved matters), the Conservation of Habitats and Species Regulations 2010 as amended apply.

3.13 In its view, it was unlikely that the proposal would have a significant effect on any qualifying interests either directly or indirectly. An appropriate assessment was therefore not required.

3.14 Regarding Annex 1 species of Birds Directive, based on the information provided, it is considered that during the operating lifetime of the proposal it would not have a significant effect on the conservation status of any of the raptor species concerned.

3.15 Regarding landscape it was considered that the scale of the proposed development is such that the receiving environment has the capacity to absorb it without significantly affecting the overall landscape character.'

3.16 **Scottish Water** had no objection to the proposals.

Internal

3.17 **The archaeology service** stated the development is situated within an area of extensive Prehistoric activity. Two sites within the zone of development were identified as possible Neolithic structures; (Site 201/CGL11 & Site 202/CGL11 SMR.1095). Historic Scotland's response is noted.

3.18 Due to the extensive number of recorded archaeological sites in the wider area and the nature of the landscape (blanket bog) within the development area; this site has the potential to encounter unrecorded buried archaeological remains. It recommended a limited program of archaeological evaluation (including any new access roads) to inform any strategy of mitigation that maybe necessary. This was required to identify any unknown archaeological features that may be present. A condition was proposed to require this if permission is granted.

3.19 **The environmental health department** said there was limited information about the noise from these turbines in the application. The minimum distance between one of the turbines and noise sensitive premises is about 620 metres. The applicants should demonstrate that the turbines would meet the attached noise conditions.

3.20 **The roads department** had no objections in principle, but further discussion/agreements would be required with respect to the proposed route of components to site and any assessments that may be necessary as a result of any abnormal loading or localised road/junction widening to accommodate transportation vehicles.

REPRESENTATIONS

3.21 Representations were received either by the council or direct to DPEA from the following:

Alasdair Allan MSP
Colin G Anderson
Community Energy Scotland
Stephen Leslie
H M MacAuley
Angus McNeil MP
Councillor Donald Manford
North Uist Community Council

3.22 These representations referred either to procedural matters, which are not relevant to the determination of the application, or raised issues already covered in detail by other parties. All relevant points have been taken into account in making the recommendation.

3.23 Councillor Manford was also present at the hearing as part of the team representing the applicant for 7 Bornish. That application is the subject of a separate report, but some of the issues raised by him are relevant to both applications.

4. SUMMARY OF THE CASE FOR MINISTRY OF DEFENCE

Details of the operation of the range control radar systems at South Uist and St Kilda.

4.1 The Ministry Hebrides Range was formed in 1957 to allow the development and practice of long range tactical battlefield artillery, and ground based air defence. It has since developed as a valuable internal Ministry of Defence UK tri-service asset and is also used by many other nations. The range provides about 100 direct full time jobs on the southern isles and has provided seven engineering apprenticeship roles over the last three years.

4.2 It is the second largest employer in the Western Isles, after the Comhairle. The Hebrides range, like many other Ministry ranges, is operated by QinetiQ. QinetiQ provides test and evaluation (T&E) and training support services to the Ministry under a 25-year contract – known as the Long Term Partnering Agreement (LTPA).

4.3 The Hebrides range consists of a deep range, for complex weapons trials and in service firings, and an inner range, for ground-based air defence campaigns. The range occupies a large sanitised airspace with unlimited altitude and it can be extended to 57,000 kilometres² for specific trials. This large area and its nearby airfield make it ideal for air-launched weapons operations. This fully instrumented controlled environment enables the evaluation of land, air and sea weapons, systems and training.

4.4 Under the LTPA, the development, testing and training of complex weapons systems and military platforms including both fixed and rotary wing aircraft, land and sea platforms is supported. The controlled environments are suitable for testing a wide range of systems within this valued UK strategic asset. The enforced integrity of the danger area, by radar observation, ensures the following activities can be conducted safely:

- Fixed wing capabilities include fast jets and larger aircraft supporting air-to-air and air-to-surface attacks against specially designed target systems, store drops and the exercising of defensive aid suites.
- Proving trials are conducted on new rotary wing aircraft, including the latest Lynx Wildcat, before they go into service. This involves a complete spectrum of activities from the trial releases of sonar buoys and testing defensive aid suites to strafing against remote-controlled targets as part of training exercises.
- Land platforms, such as Starstreak and Rapier, use the LTPA ranges for T&E and training. A variety of airborne and surface targets, including fixed structures, are provided within the range to support these activities.
- Sea platforms, such as the new Type 45, use the ranges to exercise Modern systems such as Sea Viper and various calibres of ordnances.
- Testing and training with the Ministry's numerous navigational systems, radar and optical sensors.

4.5 The ground based air defence (GBAD) capability offers the Ministry a range of facilities for operator and weapon system evaluation for their accuracy in protecting against air attack and the range is used by GBAD prior to their operational deployment.

4.6 Fire units can be fired under tactical conditions or fully instrumented for near real time or post event analysis using multiple or mixed weapon platform engagements and laser designation pods.

4.7 The Ministry uses aerial targets capable of supporting basic and advanced profiles and fighter ground attack manoeuvres. Targets can be flown as singletons, matched pairs, or mixed formations allowing for the tactical evaluation of operators, weapon commanders and threat assessment. Synthetic target facilities also exist for rapier engagements using real or simulated missiles. The range can also facilitate engagements in electronic warfare conditions using standoff airborne jammers.

4.8 Training is one of the most important factors for achieving success in theatre. The Hebrides range offers the Ministry the space and realism to provide training to the highest levels and can accommodate national and international joint training utilizing the vast danger area for sea and air assets. The range provides aerial targets, instrumented barges and land targets for T&E, research and development, and training purposes.

4.9 The Combined Aerial Targets Service (CATS) is a 20-year contract to satisfy the UK Ministry with a worldwide service of subsonic aerial targets for training and testing weapons systems. Aerial target systems include Banshee, Voodoo, Mirach and Popups. In addition sea target barges, static or mobile, and other sea targets provide for countermeasure deployment, infrared sources, threat emitters or target faces, as well as the provision of passive and active radar augmentation are also available.

4.10 The Ministry uses unmanned aerial systems (UAS), an increasingly important enabler in surveillance, security and defence. The range provides a controlled and sanitised environment for development, testing and training with UAS and facilitates take-off and landing sites, targets of opportunity and specially deployed targets for sensor trials.

4.11 The physical size of the range danger area, an area known to be free of non-participating aircraft or shipping, is unique to the Hebrides range. This is invaluable when developing, testing, and practising, the use of long range high energy military weapons in realistic situations and target scenarios. The range danger area is known as the EGD701 complex. It should be noted that a consultation has taken place regarding expanding the danger area to take account of the needs of modern weapon tests. The expansion would take place to the north, west and south. The present danger areas would be subject to some alterations of boundaries and numbering. Area D701E, which includes the application site, would be renumbered D701Z

4.12 Firing of live weapons, as carried out at the range, is dangerous. To mitigate for safety, a layered approach to the production of the range danger area is used. The integrity of the range danger area is assured by the coverage of the surveillance radars and land based manned lookout points for aerial target launch and recovery. The location of the radar on St Kilda allows coverage over the range danger area and aircraft approaches to the area up to 60 nautical miles. For some trials, a larger area beyond the range danger area is required. In these instances agreement is sought from airspace regulators to 'clear' it so as it can be used as part of the range.

4.13 Even with all the control measures in place to ensure trials/operations are conducted safely, infringements by intruders still breach the range boundaries during active periods. There have been 29 recorded infringements since April 2000. The range operators are legally and contractually bound to keep all risks 'As Low As Reasonably Practicable' (ALARP). Infringements detrimentally affect the range in terms of trial time and delays caused by investigations.

4.14 The land based radars used to assure the integrity of the range danger area are the air defence radar at South Clettraval on North Uist, the Watchman air traffic control radar – the range radar – and Sea Watchman, both on St Kilda, and the marine surveillance radar at the range control building on South Uist. The two Watchman radars are remotely operated by the range control staff at the range control building.

4.15 The relevant radar in this case is the Air Watchman, used as the 'Trusted' display for the control of trials participating aircraft and aerial targets. It is an airfield approach radar with a display range of 60 nautical miles. In addition to controlling participating aircraft and UAV targets, the radar is also used for intruder detection. In the past it has detected incursions which would have otherwise not been observed. Such undetected incursions are a direct threat to flight safety.

<u>Details of the impact that the erection and operation of wind turbines proposed for erection at Locheport could potentially have on the operation of the Air Watchman radar system.</u>

4.16 Where a proposed wind turbine is found to be within the coverage of, and detectable by a military radar, an operational assessment determines if the potential impact is manageable or not. Where the potential impact is not manageable, the Ministry will object.

4.17 The ADATS RSP technical assessment provides an indication of whether a proposal is within radar coverage and which facilities are likely to be affected. The technical assessment for Locheport determined that the proposed development was within radar coverage and consequently likely to be detected by the Hebrides range radar.

4.18 The potential impact that a wind farm has on radar systems varies considerably depending on the characteristics of the turbines in question, differences

in equipment performance depending on location and on the relevance of the area in question to the Ministry mission. Local topography can mask turbines thereby reducing the impact on the radar; on the other hand the local terrain may be such that the turbines are clearly visible on radar and will therefore influence the radar system performance.

4.19 Where the technical assessment indicates that the proposal was within the coverage of, and detectable by a military radar, the proposal is then subjected to an operational assessment by an appropriate Subject Matter Expert (SME). The SME determines whether the technical impacts are operationally manageable.

4.20 Radar operates by radiating electromagnetic energy and detecting the echo returned from reflecting objects (targets). The amount of electromagnetic energy reflected back to the transmitting antenna by an object is determined by the objects radar cross section (RCS). The formal definition of RCS is a relatively complex mathematical equation but in simple terms it can be explained as the proportion of transmitted energy scattered (reflected) back to the receiver (called backscattering) from an object. This constitutes the radar echo of the object, and the intensity of the echo is proportional to the radar cross section.

4.21 To reduce the likelihood of unwanted returns being displayed a number of techniques can be used. One technique is Moving Target Detection (MTD): this reduces the probability of returns which have no relative velocity being displayed on the screen. A feature of MTD processing is the exploitation of the Doppler effect to determine relative motion. The Doppler Effect is the apparent change in frequency of an electromagnetic wave when there is relative motion between the transmitter and receiver. If the receiver is moving away from the transmitter the frequency appears to decrease and if moving towards, increase.

4.22 In radar there are effectively two transmitters and two receivers. The radar transmits and receives while any reflecting object effectively receives and transmits. Due to the size and rotation speeds of wind turbines blades, they generate a significant doppler-shift in the frequency of the returned signal so wind turbines will therefore be visible as moving and therefore valid targets on radar displays so long as sufficient energy is reflected by the wind turbine. The energy reflected will be a factor of the distances involved, terrain path and RCS of the wind turbines. The detection and identification of aircraft targets in and around regions of a wind turbine/turbines is therefore likely to become difficult, as there may be nothing to differentiate them on the screen from a turbine.

4.23 The proposed two turbines at Locheport are located 43.2 nautical miles (80.1 kilometres) from the Hebrides range radar at St Kilda with a turbine RCS of 119.8 metres² and are likely to be detected by the radar. The turbines, at 77 metres in height to blade tip, are therefore likely to appear on the operator's screen as a re-occurring return in the area. The Locheport technical assessment report is provided at document 17.

<u>Hebrides range operational assessment</u>

4.24 Factors considered by the range operators include:

- The proximity of the proposed turbines to the boundary of the air danger areas, a consideration with the Locheport proposal. The Locheport turbines would look like an un-scheduled aircraft coming in to land or just taken off from Benbecula airport. This airport is sometimes used to practise “touch and go” (rollers) manoeuvres particularly during joint NATO exercises. The fast jets (usually) need to practise putting their wheels on the runway and then immediately taking off again. They can do multiple attempts at this manoeuvre to maintain currency. Any aircraft practising such ‘bounces’ coming into Benbecula is almost certain to enter the range danger area. The danger is that radar operator workload will increase which, in turn, increases the risk of an error so the more likely it becomes that air safety will be severely compromised.

- The position of the proposed turbines in relation to known air routes, fish farm helicopter operating areas, approach and departure tracks for Benbecula and Barra airfields and known local landing areas out with the establish airfields, such as guest houses, hotels and beaches. The range has experienced incursions from the Dark Island Hotel on Benbecula and for Locheport, there is a history for “touch and go” manoeuvres described above. The danger with the proposed developments is that, if permitted and constructed, radar operator workload will increase which, in turn, increases the risk of an error so the more likely it becomes that air safety will be severely compromised.

- Interaction with existing turbines or known points of electronic interference or radar clutter. The rotating blades of wind turbines can induce a Doppler shift on the radar returns and allow the returns to pass into the Moving Target Indicator (MTI) filters of radar processors. The result is the display of unwanted returns (either clutter of false alarms). Such clutter can prove misleading, inducing the operator to treat the clutter as though it were an aircraft. Additionally, the radar returns from a real aircraft can be lost amongst the additional clutter returns. Both outcomes can lead to some or all of a number of effects: confusion for the operator; a delay in reaction to a situation or decision making when having to separate out false and real returns; an incorrect indication or assumption of an aircraft position; loss of an aircraft position; and the unsafe provision of ATS. Existing developments within the vicinity of the proposed development are already producing clutter due to detection by the air defence radar at South Clettraval.

- The risk of break-through of the false return as a credible blip on the operators' display or as a credible return for automatic plot extraction systems. This is a consideration with the Locheport proposal. The installations are large enough to simulate radar returns from real aircraft on the air Watchman radar, with enough regularity to form credible looking ‘tracks’. Again the danger is radar operator workload.

- The proximity of the development to remotely piloted air vehicle launch and recovery areas. The recovery and launch of unmanned air vehicles such as aerial targets are nearly as lethal to manned aircraft as missiles, should there be a collision. This features in the objections under "proximity…to Range Danger Area" described above.

- Increases in workload for operational staff carrying out safety related tasks. This is relevant to the Locheport proposal. The more false alarms have to be investigated to ascertain if they are aircraft or turbines, the more likely the radar operator is to be distracted from real incursions from other areas.

- The risk of terminating range activity as a result of false radar returns. This is relevant to the Locheport proposal. The radar operators will take action to stop a trial or firing if there is any doubt as to whether a credible track that looks like it is about to enter the range danger area is generated by a wind turbine or a real aircraft. The needless waste of time, effort and ultimately cost both to the trial sponsors and the range's reputation for not being able to 'deliver' was part of the consideration to object to the application. Operators consider how much time is available to consider the return potentially caused by a turbine; how likely it is that the clutter will be displayed; how likely it is to form a false track on each of the radars; how much clutter is in that area already; and how much, if any, 'shadow' is cast into the marine area.

4.25 In undertaking this operational assessment, the Ministry considered whether the proposed development would have an unacceptable adverse impact on aviation and defence, and would affect the safe use of defence service operation. For the above reasons, the Ministry's assessment was that the proposed development is unacceptable.

Impact on range radar

4.26 Wind turbines generate intermittent clutter to radar. This clutter varies with the number of turbines (cumulative effect) and distances between turbines. The effects of wind turbines on radar as described above are applicable to the air Watchman radar at St Kilda. Aircraft returns will be de-sensitised in the vicinity of wind turbines. This is because the false alarms they generate build up in the 'clutter memory' of the radar so the radar automatically desensitises itself in that region. This makes it less likely to see smaller aircraft in this area.

4.27 Figures produced show the clutter generated by a wind farm on the air Watchman range radar display. The returns from the three turbines at Loch Carnan look like an aircraft flying to the south-east away from the range danger area. The Dark Island Hotel turbine return in addition to the false return above appears like an aircraft that did not paint on the last radar sweep; it cannot just be dismissed by the controller as just a false alarm.

4.28 The danger emanating from the impact of wind turbines on the Hebrides range comes principally from operator loading and distraction. For example an

operator could decide clutter is a wind turbine when actually it is a micro light or a helicopter. The more wind turbines there are, the more clutter is generated which increases the workload on the operators which, in turn, increases the risk of an error so the more likely it becomes that air safety will be severely compromised.

4.29 In Aug 2010, two incursions of a helicopter taking off and landing at the Dark Island Hotel occurred during a UAV trial. When the incursions were spotted, the radar operator diverted the UAV from the direction of the helicopter to avoid a potential collision. The reaction time for the controller to take the avoiding action would have been less than a minute. It is therefore essential that operators can see incursions as they happen and are not overly hampered or impacted by turbine clutter.

4.30 Radar operators are able to 'Pan' and Zoom' within their radar displays. Every time a pan or zoom function is conducted by an operator the radar picture including returns and historic returns such as trails, are momentarily lost until the radar picture is refreshed by the next radar rotation. Several radar rotations are then required to verify and understand what it the operator is now seeing. This all takes time and operator effort. Clutter can distract the operator from areas of potential real incursions – this is known as 'operator distraction'.

4.31 The additional burden of turbine clutter and its investigation increases the 'load', which is what the operator needs to consider, on an operator and can lead to a reduction in air safety. With this distraction, there is a material risk that the operator could miss a real incursion. An error could lead to a trial being abandoned resulting in wasted time/effort/cost or, the worst case scenario, a collision.

4.32 To assist with controller alertness and concentration, the controller personnel are changed at regular intervals and there is a change over process that is followed. This involves briefing the relieving controller on what is happening and where, with regard to the radar picture. Depending on the wind speed and direction the returns from the wind turbines vary throughout the day. This in itself complicates and extends the handover briefings. An increase in turbine numbers increases the complication of and time taken for the handovers.

4.33 The Ministry technical assessment of the Locheport proposal determined that the proposed turbines would be visible to the air Watchman radar at St Kilda. The turbines could therefore present themselves on the radar picture in a similar fashion to the Loch Carnan turbines discussed above. The proposed turbines would have an unacceptable adverse impact on air safety. The Ministry regrets not objecting to the Loch Carnan turbines although it has an agreement with the operator for them to be switched off for up to four days per year. This has never been implemented.

4.34 In the event that a false track is created that looks like it will incur on the range danger area then all trials activity is stopped. The Ministry and its contractor, QinetiQ, have a duty for safety which everyone involved in trials work takes very seriously.

Responses to the applicant's comments

4.35 Regarding aircraft operating inside the danger area complex being provided with a range air control service this is only as appropriate to conduct a range air control task.

4.36 Although aircraft can overfly the danger areas at any time this is a problem insomuch as any aircraft could infringe the range danger area air space. The range operators have a duty of care for their safety, which is why they have to be vigilant with the surveillance assets.

4.37 The inconsistencies of returns, or clutter, generated by the turbines is an issue. This is caused by whether blades are moving or not, and at which speed. Each report from certain known areas of incursions has to be investigated. This adds workload to the radar operators and can delay or hinder trials.

4.38 As well as having a situational awareness of all aircraft movements within the boundary of the Benbecula danger area complex, the operators also need to have situational awareness outwith the range danger area so as to detect aircraft that may infringe the area when active.

4.39 Although the turbines would be more than 5 nautical miles from the boundary of D701C this is considered as less than one minute flying time by a fast jet. Radar operators need sufficient time to take appropriate action so as to avoid collisions.

4.40 It is claimed that the Ministry's view that radar is the only sure way of operating in uncontrolled airspace is not only inaccurate and misleading. The aim of the operators is to keep people safe from hazardous activity, and surveillance radars help to achieve this.

4.41 The air Watchman radar is an air traffic control radar and is licensed as such. It is the radar that allows the control of participating air traffic within the range danger area airspace. It is also used by the radar operators to ensure non-participating aircraft do not infringe the range danger area.

4.42 It is claimed that the range operators are unsure as to the extent of the potential impact of the proposal. The Ministry's technical and operational assessment has determined that the impact of the two proposed turbines will be operationally unmanageable.

4.43 Range operators are aware of existing turbine installations of similar size that appear as clutter on the radar display.

4.44 Whilst it is correct that pilots are expected and required to remain clear of the danger area when active the range operators have experienced pilots incurring the danger area when active. The instances of unnecessary interruptions to Ministry activities within the danger area will increase due to false infringement indications.

4.45 A buffer would allow the range control staff to inhibit the firing of weapons and launch of UAV targets. It is intended to improve air safety.

4.46 It is not accepted that the clutter on the radar screens would not result in any significant impact on the operation of the ranges.' The Ministry operational assessment has determined that the impact of the Locheport proposal would be unmanageable.

Potential mitigation

4.47 Where proposed wind turbines are found to be within the coverage of, and detectable by a military radar, an operational assessment determines if the potential impact is manageable or not. The relevant operational subject matter expert conducting the operational assessment will give consideration to what reasonable measures may be put in place to mitigate the effects of the wind turbine development.

4.48 It is open to developers to propose a form of technical mitigation to the Ministry to try to reduce or remove the predicted interference on the Ministry assets. Any mitigation proposal should be submitted prior to the determination of the planning application and should be of a sufficient detail to allow the Ministry to make a fully informed assessment on the detailed technical impact on the Ministry asset in question.

4.49 A technical analysis is conducted on the mitigation proposal which will determine if it is acceptable from a technical perspective to the Ministry, or whether there may be technical reasons why the proposed mitigation is unacceptable.

4.50 The detailed mitigation report along with the technical analysis is considered by the operational SME. The exact location of the area proposed for mitigation is carefully considered with regard to (and not limited to) the following: Sensitive Air Defence areas of interest; any local points of interest around which air traffic would need to be routed and thus could impact on the mitigation area; the presence of any military training areas or transit to and from military training areas; the presence of any other interference which already obstructs the radar detection which will determine if further reduction in detection should be accepted (as this can be the impact of proposed technical mitigation).

4.51 From the Range perspective, an operational SME will consider several factors including, but not limited to, the location of the proposed turbine in relation to the range danger area boundary; operations; existing turbines; clutter; likelihood of a false alarm; and increase in operator workload. No inference should be taken as to the acceptability of a mitigation proposal based on the outcome of Ministry's consideration of a mitigation proposal for another wind turbine.

4.52 Regarding the Comhairle's lack of acceptance of the Ministry's position, it is considered that greater weight should be attached to the Ministry's concerns than to policy promoting renewable energy development.

4.53 The Ministry has engaged with the Comhairle regarding the safeguarding requirements of its assets and operations in the Western Isles. Ministry air defence subject matter experts visited the Comhairle in 2013 to provide further information as to the air defence safeguarding requirements. With regard to Locheport several mitigation options were discussed and found to be unacceptable. The range operators also engage with the local community and are represented in the Hebrides Range Task Force. The community are also represented on the Task Force.

The potential benefits of the proposed turbines.

4.54 In dealing with the wind turbine application, there is a conflict between the policy to encourage renewable energy development in the UK as a whole, and the need to protect defence and military interests and installations. It is for the decision maker to balance these competing interests, taking into account material considerations.

4.55 With the Locheport application Comhairle's Director of Development's report to the Environmental and Protective Services Committee recommended refusal of the application on the grounds that it does not comply with planning policy.

4.56 The planning context within which the impact of the proposed development has to be assessed includes national policy and advice, the local development plan and other material considerations, as set out above.

4.57 Ministry's position is that, for the reasons set out above, the proposed development would have an adverse effect upon defence interests. A relevant objection was lodged citing unacceptable interference with its radar operations. The committee reports concluded that there were no material considerations to indicate that the Comhairle's Development Plan should not be accorded priority.

4.58 In respect of the Locheport application the committee did not consider that Ministry had demonstrated to its satisfaction that the proposals would have an adverse impact upon defence. The Ministry submits this is an error on the part of the committee as local planning policy of itself places the onus of this upon developers. The developer has not shown that there is no adverse effect upon defence interests. The Ministry is uniquely placed to assess such impacts and any such objection lodged should not be dismissed lightly, particularly where there is no evidence of any material consideration which is said to outweigh defence considerations.

Conclusion

4.59 The Ministry respectfully requests that the Scottish Ministers give full consideration to aviation safety and national security, and attach greater weight to its objection than to any potential benefits of the proposed turbines. In the current circumstances, the Ministry considers that planning conditions would not be appropriate to address its concerns.

5. SUMMARY OF CASE FOR NORTH UIST DEVELOPMENT COMPANY

Background

Notes: 1. References to air defence radar in original documents are not referred to as this is unnecessary following the Ministry of Defence's withdrawal of its objections on these grounds.

2. The applicant's consultant's report refers to the 'Benbecula' radar and range complex. In this summary I have changed these generally to 'range control'. The range control is on South Uist and the Watchman radar head on St Kilda.

5.1 The North Uist Development Company (NUDC) was established in 2010 to promote the social, educational, cultural, economic and environmental wellbeing of the residents of the area known as North Uist. The area faces many challenges with a falling and ageing population. The company has over 600 members, over half of those eligible to join by virtue of living in the HS6 post code area. It has nine volunteer directors and two part time development workers. The company currently has very limited financial resources. The income generated from the proposed turbine development would be utilised to meet the objectives of the company:

- promotion of community development, including rural regeneration following the principles of sustainable development;
- provision of assistance to people who are disadvantaged by reason of age, ill-health, disability, financial or other disadvantage;
- promotion of education including all forms of training for work and life skills;
- advancement of the arts, culture and heritage, including support for the Gaelic arts and the protection of buildings and sites of architectural or historic importance;
- protection and enhancement of the natural heritage and environment; and
- relief of poverty in such ways as thought to be fit.

5.2 Delays caused by the application being called in have prevented the company from pre-registering for Feed in Tariff with OFGEM by 31st December 2013. The effect of this is that, due to the reduction in Feed in Tariff rates, the predicted loss of profit should the application be approved is £1.3 million, based on figures produced by Community Energy Scotland.

Impact of turbine development on operation of Ministry of Defence range radar

5.3 The company commissioned Wind Farm Aviation Consultants Ltd. (expert aviation advisors to the wind energy industry) to review the Ministry of Defence objections to its application. Its response is set out in its letter of 18th November 2013 (NUDC 1).

5.4 Air Traffic Control Officers (ATCOs) are not permanently based at the Hebrides range control, but travel up from Aberporth when needed to cover exercises in the danger area complex. When controlling at Hebrides range control centre, Aberporth controllers are only authorised to provide services to aircraft inside

the boundary of the designated range airspace; they are not cleared to provide a service to aircraft, military or civil, outside of the danger area complex.
The following considerations apply:

- Aircraft operating on Ministry/QinetiQ tasking inside the danger area complex are provided with a Range Air Control Service (RACS).
- The controllers operating at range control do not offer any form of Danger Area Crossing Service (DACS) when the airspace is active; there would not appear to be any means by which aircraft can talk with the controllers i.e. due to the lack of DACS every aircraft has to be considered to be unknown.
- By definition, and as a result, the controllers do not "*use the radar to separate monitor and control authorised and unauthorised aircraft in busy uncontrolled airspace"*
- Alternatively aircraft, civilian or military, can overfly the danger areas at any time.
- For the turbine return to be within the boundary of (danger area) D701E that area would have to be active and it is only active after the cessation of normal civil aircraft operations at Benbecula Airport.

5.5 To facilitate Hebrides range control a Watchman ATC radar, a 10 centimetre Primary Surveillance Radar is provided, located on St Kilda. Wind turbines in line of sight of this type of radar are likely to create clutter (unwanted radar returns) on the display screen where there is insufficient terrain to screen the turbines and there is enough reflected energy received at the radar receiver to trigger a response. The radar will only display wind turbines as clutter when turbine blades rotate in such a way that the radar is deceived into treating the echo as if it is a moving aircraft; this is not a constant effect.

5.6 It is not be disputed that, in the case of the St Kilda Watchman, the proposed turbines will be detected by the radar. There will be occasions when the turbines will show on the radar as clutter. Whether these occasions will cause a coincidental confliction with range activity, or how often that might occur, will require the range authorities to discuss the activity levels and frequency of the radar facility being manned.

5.7 Under the auspices of the Air Traffic Services Outside Controlled Airspace provisions, if clutter is present on the radar screen it is possible that a controller may not be able to provide a full radar service. They may not always be able to guarantee that the clutter was not obscuring an aircraft or be able to distinguish whether the clutter was a turbine/other interference, or actually an aircraft that has just appeared on the screen. However, it is the operational impact from this clutter that should be the focus of the issue.

5.8 Ordinarily, operational mitigations include routing an aircraft around the clutter to retain a five nautical mile separation from it, or by limiting the service and warning an aircraft that the provision of either a Deconfliction Service (DS) or Traffic Service (TS)2 is going to be limited until the aircraft has passed clear of the clutter. The exact impact upon the provision of ATC services varies from one location and aviation scenario to another.

5.9 In the specific case of the Hebrides range radar and the Locheport turbines, however, it is not accepted that, if clutter is present upon the radar, this impact would be unacceptable.

- The controllers at range control do not provide a radar service and cannot control aircraft outside of the danger area boundary.
- The controllers are not authorised or licensed to control in the airspace outside of the danger area nor are aircraft mandated to call the Hebrides range for a service.
- Radar line of sight modelling to other turbines in the area would suggest that at least some of those will be visible to the range radar; and impact from the proposed turbines is unlikely to be any greater than that which already exists and with which the Ministry of Defence apparently copes. When D701E is activated there should be no greater effect on operations than that which currently exists.
- The turbines are more than five nautical miles from the boundary of D701C (despite D701E and for which the Ministry of Defence must have mitigation for the other turbines with line of sight). Even under the most stringent service that the controller might provide it would still be possible for operations in the remainder of the danger area complex to continue unaffected by the turbine returns. The turbines cannot have any impact if the serial is contained within the area boundary.

5.10 There appears to be confusion as to the use of the range control radar and the capability it provides and the services that the deployed Aberporth controllers temporarily located at range control are permitted to provide. The Ministry of Defence has stated that: “maintaining situational awareness of all aircraft movements within the airspace is crucial to air safety, and the integrity of radar data is central to this process”.

5.11 The potential impacts of the proposed turbines, if agreed, would not apply at the Hebridean range for the following reasons:

- The controllers are not permitted to provide any service outside of the danger area to any aircraft, military or civilian.
- The turbines are more than 5 nautical miles from the boundary of D701C.
- Flight safety should not be jeopardised in the area as has been claimed.
- Radar is a valuable aid to operation of aircraft in all airspace but it does not provide situational awareness of all aircraft movements. Aircraft are not obliged to receive a service in open, uncontrolled airspace. The range does not even offer a DACS.
- Aircraft are not required to call any radar agency when operating in the open Flight Information Region (Open FIR – Class G airspace; the least regulated and available to all pilots without ATC clearance).
- The claim that radar is the only sure way of operating in uncontrolled airspace is not only inaccurate and misleading but it implies that when the radar at Benbecula is not manned for all danger area’s activity i.e. the vast majority of the time, that aviation in the area is inherently unsafe.
- The controllers do not sequence military and civilian aircraft and there should be no operational impact on aircraft operating in the danger areas from any

activity beyond the boundary. Such an impact would only be affected if an unknown aircraft actually entered the active complex.

- The radar is not being used as an air traffic control radar but for range control and is more likely being used as an aid for clear range procedures.

5.12 Radar projections carried out by the consultants to inform its views suggest that the turbines may be visible to some degree and some of the time. It is unlikely that normal Watchman radar filtering techniques (Moving Target Indicator/Ground Clutter Filter) will remove these unwanted returns.

5.13 Irrespective of whether Hebrides is managed for range control due to serials taking place, or the danger area complex is not active, other aircraft can overfly the proposed and existing turbine sites but with the pilot owning the responsibility for separation from terrain and obstacles without talking with any controller present at Hebrides range control.

5.14 The requirements of the UK Aeronautical Information Publication (UK AIP) to permit flight alongside and immediately adjacent to the danger area boundary places the responsibility of the aircraft approaching the danger area to remain clear of the manoeuvring aircraft . Pilots, both military and civilian, are expected and required to remain clear of the danger areas and outside of the existing boundary when those areas are active. Action is required to be taken only if and when the aircraft outside of the airspace actually penetrates the danger area, a practise adopted at other danger areas.

5.15 Given the airspace environment in the area of Benbecula/South Uist, it should be expected that aircraft will fly close to the boundary of the danger area. Such an event should not lead to the cessation of danger area activity as it is normal accepted practise and permitted under the rules pertaining to flight in the region of danger areas. Given the other airspace protocols that are in place around the danger area to permit civil general aviation and military low flying up to the edge of the complex, the current levels of aviation safety should not be affected or reduced and there should be no impact on the day to day aviation activities that take place in the danger area.

5.16 The issue is determining the operational impact of any clutter on Hebrides range control. The St Kilda radar is a range control radar operated on behalf of the Ministry of Defence by QinetiQ. It is not used for aerodrome approach control, or to provide a Lower Airspace Radar Service (LARS) and it is understood that the controllers that deploy from Aberporth to the Benbecula range complex are not cleared to provide a radar service to aircraft operating outside the confines of the range complex. Given that all range activity is required to be contained within that boundary and is not to affect air activities outside those limits, it is therefore difficult to understand what impact, if any, the turbine will have on range operations other than when D701E is activated and only if the turbines presented greater impact than those which already exist.

5.17 It is difficult to reconcile the QinetiQ understanding that the potential impact of turbines outside the danger areas, potentially creating radar clutter, could be such that safety would be compromised to the extent that activity within the range would have to be suspended. This is not the applicant's experience of, or knowledge of, operations at other Ministry of Defence ranges.

5.18 If the proposed Locheport turbines are in line of sight and could, possibly, create occasional clutter on the radar there are other wind farm sites, in various stages of development or actually operating in the area and in a similar aspect to Locheport, for which QinetiQ must have mitigation in place (including within D701E). Without such mitigation the cessation of danger area activity must occur every time the areas are activated because of one or more of the wind farm developments (that already exist) which are in the vicinity of the radar and which would present as clutter on the controllers screens. This assumes controllers are actually present every time the danger area is activated. (If the presence of the turbine and the potential impact were so great, as perceived by QinetiQ/Ministry of Defence, in that it could impinge on the flight safety levels required by the range during flying operations, then it would be safe to assume that the radar facility is manned for every activation of the danger area complex that involves aviation.)

5.19 The Ministry of Defence has never provided any justification for altering its 2010 preliminary assessment when it advised it would not object to the proposed turbine development. Based on this assessment the company incurred considerable expense and voluntary effort in developing this community turbine proposal.

5.20 A number of detailed concerns are set out relating to correspondence with the Ministry of Defence and its position regarding the proposed development:

- Inconsistency by the Ministry of Defence about the E44 turbines submitted for planning approval, rather than the larger (99.5 metres to blade tip) E70 turbines previously considered in the Comhairle's screening opinion;
- Efforts made by the company to address Ministry of Defence concerns;
- Lack of response regarding the ability of RAF Buchan to operate, surrounded by many large turbines in a busy air space;
- Range Danger Area D701C. The company notes that this extends for a considerable distance to the west of North Uist. The proposed turbine development is some 5 nautical miles from D701C and it is questioned how regularly this danger area is activated and if the section of the danger area which is close to the Uist shore is ever used. Given the leisure and fishing activities which take place in this area it is considered very unlikely that the dangerous activities would be carried out in the inshore section of D701C.

5.21 Criticisms are made of the Ministry of Defence's responses to a number of wind turbine proposals. These include changes of attitude resulting in objections being withdrawn after significant periods of time, lack of accurate records regarding turbine locations, and lack of accurate original assessments.

5.22 The company understands it may be possible to put mitigation measures in place to overcome potential wind farm disturbance on range control radar. The

company has sought to discuss possible measures with the Ministry of Defence, but has had a negative response and been excluded from discussions between the Ministry and the Comhairle.

5.23 The company is very concerned that the cost of any mitigation, should it be required, could potentially reduce the funds available for it to invest in the North Uist community to a point which undermines the financial viability of the project. It will only agree to mitigation if the Ministry of Defence can clearly demonstrate that the proposed turbines would have a significant operational impact on range control radar. It is not aware of the outcome of the demonstration programme referred to in the meeting which took place between the Ministry of Defence and the Comhairle on the 28th August 2013 and if these tests would have any impact on the decision to object to the application.

5.24 The company understands that the Ministry applies a 10 on 10 policy (10 turbines within 10 kilometres) in determining the acceptable number of turbines. If this policy has been used in coming to the decision to object, evidence should be provided that the policy is based on sound technical and scientific data appropriate to the range control radar. The company seeks assurance that the policy and the application of the policy take account of turbine size and distance from the affected radar.

5.25 It is also concerned that in coming to a decision to object to our proposed turbine development the Ministry may have taken account of the existence of the danger area D701E (renamed D701Z in new "Airspace Change Proposal for the Hebrides Range"). At a presentation by QinetiQ on the Ministry of Defence's "Airspace Change Proposal for the Hebrides Range" to the Hebrides Range Task Force on the 31st October 2013 the requirement for D701E, which extends over a large area of North Uist, was questioned. QinetiQ said D701E exists to allow target launches from Balivanich Airport, although this is very unlikely, due to safety reasons. D701E had not been "activated" for a very long time, possibly 30 years.

5.26 The Comhairle, in response to the consultation on the Air Space Change Proposal asked that D701E be deleted. The Ministry of Defence has opted to retain it. The company considers that it is unreasonable if the existence of D701E, which appears to have no prospect of being activated, is resulting in the objection to the proposed development.

<u>Mitigation Possibility 1; Switching Turbines off or altering direction of turbines during test firings at Hebrides Range.</u>

5.27 The company would be willing to shut down or alter the turbine orientation during live firings at Hebrides Range, with an agreed maximum shut down period in any one year. Storas Uibhist has an agreement with the Ministry to switch off the

three turbine development in Loch Carnan in South Uist for up to four days per year when required to do so by the Ministry.

5.28 In its response to the Comhairle of 30th August the Ministry states that turning off "may have merit as to the issue with range radar". It advises however that "in reality it may not be practical as the periods of deactivation may be long lasting and frequent". This is at variance with statements made by QinetiQ advising that the required shut down period would be for a matter of minutes running up to a live test. Live firing tests would take many months to set up. Based on a five minute shut down per test, and a maximum shut down period of four days, this would allow 1,152 tests to be carried out per annum. The company considers agreeing to shut down turbines for a specified but limited period would be a possible way forward.

Mitigation Possibility 2; Ensuring that there is no increase in turbine numbers in local area

5.29 If the Ministry's objection is based on the number of turbines in the area exceeding a set and proven threshold, the company would look to agree with third parties the removal of two other smaller turbines in the area.

Mitigation Possibility 3; Adoption of "Thruput" mitigation solution.

5.30 It is understood there is the possibility of putting in place a software mitigation solution. Due to high initial costs and on-going annual charges, the company would only consider offering this solution as a last resort.

Benefits of Proposed Development Measured Against Possible Adverse Impacts

5.31 As part of the planning application the company has illustrated the importance of the development to those who live in North Uist and how it meets Scottish Government and local strategic policy. Having a vibrant local community with a good demographic spread must also have considerable advantages for the Ministry. Many of the staff employed at the Hebrides range are recruited from the local population. The community wind turbine development would make a significant contribution to the regeneration of North Uist and improve the quality of life of those who live there. The Ministry of Defence should consider the benefits which the development would have for the local population and its ability to recruit and retain locally based staff in the future.

Noise

5.32 In response to concerns expressed by the council a consultant's report was submitted dated 17 September 2013. This concludes that the calculated operational noise immission levels meet the noise level limit of 35dB LA90 at all noise sensitive receptors, and that as such a full ETSU assessment is not required. Operational noise impacts are assessed as negligible.

5.33 Construction noise level criteria have been defined in accordance with BS 5228-1:2009. Predictions of noise from typical construction plant and activities have been undertaken in accordance with BS 5228-1:2009. The construction of the turbines would not exceed the daytime noise limit of 65dB LAeq or the evening and weekend noise limit of 55dB LAeq at any receptor location. Construction noise effects are therefore assessed as negligible.

5.34 The report concludes there would be no negative noise impacts associated with the construction or operation of the proposed turbines.

6. SUMMARY OF CASE FOR COMHAIRLE NAN EILEAN SIAR

6.1 The Comhairle's overarching considerations are:

- Given the current economic climate and the location of the Outer Hebrides the Comhairle faces particular challenges in stimulating economic growth.
- The creation of a dynamic renewable energy sector is one of six key economic drivers of the Comhairle in encouraging economic growth and is a core element of the Development Plan.
- The Outer Hebrides is an important strategic location for defence infrastructure and the significance of the Hebrides range to the Outer Hebrides' economy is recognised and valued.
- The Comhairle has taken decisions on the applications mindfully and with due consideration of all the issues placed before it.
- The Comhairle takes planning decisions in accordance with the development plan, unless material planning considerations indicate otherwise.
- In reaching its decisions in relation to the Ministry of Defence objections to these applications the Comhairle was not satisfied that the advice of the Ministry was sufficiently detailed to give the Comhairle comfort that its position was justified. Following assessment it was concluded by the Comhairle that the application, in respect of the Ministry of Defence's objection, was not contrary to the development plan.

6.2 The chairman of the Comhairle's Sustainable Development Committee states in the foreword to the development plan that: "The promotion of sustainable economic development lies at the heart of our efforts to support strong thriving communities, and the plan has a central role to play in the delivery of this."

Defence issues

6.3 The Comhairle's position in respect of the Ministry of Defence's objection and subsequent communications is that the Ministry has not demonstrated that the development would cause an unacceptable adverse impact on defence.

6.4 Prior to the lifting of the air defence radar objection the Ministry of Defence met with the leader of the Comhairle and some of its officers, in August 2013, and reviewed mitigation measures. The Ministry reviewed and responded to mitigation proposals tabled by the applicants and was resolute in its position that there were no acceptable mitigation measures available.

6.5 The Ministry's change in position in relation to the air defence radar highlights weaknesses in its position as to the availability and effectiveness of potential mitigation systems in addressing any adverse impacts the turbines may have on radar operating systems. That such an unequivocal position can be altered simply because of 'further careful consideration' (email dated 24/1/14 document xii) suggests that sufficient consideration was not given to the initial objection and, further, that the initial objection was defended without robust consideration of the true adverse impacts. This has the effect of undermining the Ministry's position in respect of the objection.

6.6 The Ministry objection in respect to range control radar states that: 'the turbines...will be detectable by and will cause unacceptable interference to the range control radar at South Uist and also the radar at St Kilda. Wind turbines have been shown to have detrimental effects on the performance of Ministry range control radars.'

6.7 There appears to be evidence to show that turbines can have a detrimental effect on Ministry air traffic and range control radars, but the Comhairle is not persuaded that the Ministry has demonstrated the technical reasons why two turbines sited at a distance well outwith the Hebrides range danger area would have a detrimental effect to the degree that it could be concluded it would impact on defence.

6.8 Also the Ministry does not appear to expressly state that the proposal would have an adverse impact, including cumulative, on defence, as in the development plan, or would affect the safe use of defence service operation, as per development criterion 6 of the supplementary guidance.

6.9 The Comhairle is also persuaded by a number of points in the applicant's evidence, which reviews and challenges the Ministry's position, notably the conclusion that: 'it is not accepted that the occasions when the turbines will be in the correct aspect to create clutter will coincide with the activity within the danger area to the extent that the turbines' existence would result in any significant impact on the operation of the ranges.'

6.10 The evidence states that the controllers do not, contrary to the objection, 'use the radar to separate, monitor and control authorised and unauthorised aircraft in busy uncontrolled airspace'. It highlights that it is the operational impact from the clutter that is at issue and the consultants do not accept that even if clutter is present upon the radar, that this impact would be unacceptable.

6.11 The Comhairle finds the arguments set out in the evidence persuasive and contribute to its dissatisfaction with the Ministry's explanation about the adverse impact, supporting the Comhairle's view that the development would not cause an unacceptable adverse impact on defence.

6.12 The policy 19 test is to assess that there is 'no unacceptable adverse impact (including cumulative) on defence..'. The Comhairle is not persuaded that the development will cause an unacceptable adverse impact on defence and in those circumstances concludes that the development is not contrary to the development plan, and therefore complies with it.

<u>Other development plan issues</u>

6.13 The site is not located within a 'Broad Area of Search' for wind turbine sites. It is with in the Ministry of Defence safeguarding area, the 1.5 kilometres buffer zone from settlements, the aviation consultation area and there are several scheduled ancient monuments in the vicinity. The site is not within any designated sites but is close to the national scenic area, and a special area of conservation.

6.14 The zone of theoretical visibility shows that the turbines would clearly be visible from a large part of North Uist, including a considerable part of the national scenic area. The landscape and visual impact assessment submitted by the developer concluded: "that the proposed turbines can be accommodated within the existing landscape without resulting in any unacceptable change to landscape character and views and without creating uncomfortable comparisons of scale or introducing new elements which would conflict with the existing patterns in the landscape." No concerns were raised by Scottish Natural Heritage in relation to this. Given the level of wind energy developments in the area the cumulative impact is not considered significant in relation to this application.

6.15 The application site is outwith the rural settlement of Clachan na Luib, approximately 600 metres north-east of the nearest residential dwelling there. Although the site is outwith the settlement the nature of the development means that it is preferable to site the turbines away from residential development in order to minimise loss of amenity. The turbines would be visible from the A867, the A865 and would be seen along the skyline. The site is within an area classified as Boggy Moor 1 in The Landscape Capacity Study for Onshore Wind Energy Development in the Western Isles which has a low to medium sensitivity to wind farm developments. Given the scale of the development, it is considered that the proposed development could be accommodated in the environment without significantly affecting the overall landscape character.

6.16 The proposed development has the potential to have a significant impact on the ancient monuments and archaeological remains. Historic Scotland advises that although it considered that the effects on the ancient monuments are not significant enough to warrant an objection there are measures that could be employed to mitigate against the adverse effects. Because of the defence implications this was not pursued, but would be required for the proposal to accord with the local development plan.

6.17 There are several archaeological features within the vicinity of the proposed development that would be affected by the proposed development. These could be addressed by a condition requiring a written scheme of investigation.

6.18 There was insufficient noise data submitted with the application for the environmental health service to determine whether the standard noise conditions could be complied with. No additional data has been submitted, therefore it cannot be concluded that the noise conditions can be satisfied. In view of the significance of the Ministry of Defence objection this also was not pursued further.

6.19 Due to the small scale of the development specific advice was not provided by the Scottish Environment Protection Agency. It is anticipated however that any issues relating to soil resources and particularly peat management could be dealt with by way of planning condition.

6.20 As the proposed development would be more than 1 megawatt, if the development is approved, to comply with this policy it would be necessary to conclude an obligation under Section 75 of the Town and Country Planning (Scotland) Act 1997 to guarantee land restoration and decommissioning.

6.21 As set out above, it is not accepted that the proposed development would cause an unacceptable adverse impact on defence. Other matters could be dealt with by conditions. The proposal therefore accords with the Comhairle's adopted local development plan.

Other material planning considerations

6.22 The socio-economic and environmental benefits that would arise from the development are relevant. The profits from the proposed turbines would be invested directly into the community of North Uist and Berneray to promote the social, educational, cultural, economic and environmental wellbeing of the people of the islands.

6.23 The applicant has estimated the profits over the first 20 years to be between £5.4 and £6 million. The applicant company is a registered charity with the stated aim to work with community councils, amenity groups and other community organisations to progress projects for the benefit of the community as a whole. The applicant has stated that it has commenced work on options for setting fair and robust criteria for the distribution of funds from the wind turbine project, but this has been put on hold until the planning application has been determined. Despite the criteria not being available as yet the Comhairle strongly approves of the overall objectives of the applicant in distributing profits in such a way as to regenerate the area and combat depopulation.

6.24 Community Energy Scotland has highlighted the benefits that would accrue from the proposed development. Projects which would receive funding from the profits would include a harbour development, environmental centre and archive project. The applicant has also made clear its intention to use profits to make housing plots available on the islands for the provision of new homes.

6.25 It is also likely that funds would be paid to the Western Isles Development Trust to be used for charitable initiatives throughout the islands. The profits from the development would also allow the applicant to create at least one full time post. It is anticipated therefore that the project would create employment, training and development opportunities to allow residents the opportunity to stay in the islands.

6.26 It is also clear that this application would benefit the environment and help the Comhairle and the Scottish Government meet their objectives in respect of climate change in reducing greenhouse gas emissions.

6.27 The Comhairle does not wish to give the impression that it is in opposition to the objectives of the Ministry of Defence. It has strongly supported the Ministry in providing employment in the islands. It is crucial however that people in the islands have every opportunity to take advantage of renewable energy resources. It is the position of the Comhairle that the Ministry has failed to demonstrate why this should not be the case in respect of these applications. Other material considerations also support the granting of planning permission.

7. DISCUSSION

The Hebridean Range Radar System

7.1 Of the various air and marine radar systems that contribute to controlling the range activities the relevant one in this case is the air Watchman, located on St Kilda. The St Kilda archipelago lies some 85 kilometres north-west of the range on South - Uist. The two island radars – air and marine - are located on Hirta, the largest island in the group. From here there is a direct line of sight to the South Uist range, the proposed site of the wind turbines, and the area of sea, air and land affected by the range between St Kilda and the Outer Hebrides.

7.2 During my accompanied visit to the range control headquarters near Geirinis on South Uist we were shown the operations room, including a demonstration of the live radar image from the St Kilda Watchman. This included the radar reflections from aircraft crossing the area and ships at sea.

7.3 We were shown how combined returns from existing turbines in the area could look like an aircraft. Also false returns on the screen that could appear like an aircraft missing off one of the radar rotations. It was shown how returns from turbine clutter were similar to those of real aircraft. Panning and zooming were shown to give a momentary loss of historic images until further rotations made it possible to verify what the operator was seeing.

7.4 We also saw the radar images from moving objects that could have been traffic on local roads. It was not possible to identify precisely every image on the plot. There was also some general clutter over the sea that could have been caused by breaking waves.

Radar operators

7.5 The overall picture demonstrated the issues that face each radar operator. It was explained how operators are changed at regular intervals to help alertness and concentration. Briefings take place at change over times between operators, and an increase in turbine numbers affects the complexity of these.

7.6 At the hearing there was considerable discussion about the issue of radar returns and the effect on operators. The applicant does not question there is an impact from wind turbines on radar screens. It claims, however, there is no evidence from the Ministry of proof of the cumulative threshold beyond which the impact becomes unmanageable.

7.7 The applicant's technical witness, with 28 years' experience of radar operations, including head of naval standards in air traffic control, said he had never experienced an operator say that a wind turbine return was a moving target. Clutter is a known effect that can be assessed and comes from a number of sources, including traffic. This effectively confirmed the applicant's agreement to what we had seen on the radar screens the previous day. Turbines close together would appear

as a single return on a radar screen, and the applicant did not see this as a safety issue.

Danger Areas

7.8 Control over the range is operated through a series of designated danger areas. These exist throughout the country where there are military installations and operations that require normal activity to be shut down from time to time to enable the military activity to take place safely. The area, designated D701 and D701A to E extends, broadly, from just inland of the South Uist coast out into the Atlantic beyond St Kilda, covering the area where the range testing activities take place, as referred to above. Area D701E is different in that it extends to the north-east, covering a predominantly landward area of the north-west part of Benbecula and part of southern North Uist. The proposed turbine site lies with D701E, as does Benbecula airport.

7.9 Activation, that is where sea and air traffic is excluded from the area to allow range activity to take place, is carried out by publishing a formal notice stating the dates and times when the area will effectively be closed. This is normally done at least three months before the activation date, as part of the planning process for testing, and to allow parties that may normally be using the area to make provision to keep away.

7.10 The sea areas D701 and D701A to D are activated regularly to accommodate the range's activity. There is some activity on the range for about 220 days each year, with live firing taking place during approximately 26 weeks of the year, throughout the year. As noted above, however, the D701E part of the danger area has not been activated for some 30 years, because it does not cover an area subject to test firing. This raised questions as to how important it is for the range safety. (This figure was quoted by the applicant and was not challenged by the Ministry).

Handling wind turbine applications

7.11 The Ministry assess around 3,500 planning applications each year across the UK. It says that each turbine application would be given a thorough technical and operational assessment, and this would take into account other turbines in the vicinity. It is difficult to set a threshold for clutter, and operators will use experience to determine what is happening on the screen. The number and type of turbines close to an application site will differ in different circumstances, and there is no written policy that can be used to judge the attitude the Ministry would take in any particular case. The Ministry says it will only object when absolutely necessary following the assessment.

7.12 The Ministry is in principle willing to conduct pre-application discussions but formal applications take priority for staff time. It was admitted that staff resources are stretched given the number of applications that have to be looked at.

7.13 The Ministry has a broad based risk assessment process, looking at all the hazards in an area. For example in the vicinity of the range helicopters use the Dark Island Hotel landing site and military fast jets use Benbecula airport. The three Loch Carnan turbines are a hazard that desensitizes the radar locally. The Watchman is not at the forefront of technology in this respect, and it is perceived that the same effect would happen with the Locheport proposal. The proposed site is also on the flight path into Benbecula airport.

7.14 In agreeing to the construction of the Loch Carnan turbines - in 2009 - a legal agreement was reached to switch off them off over four days per year. Compensation would have to be paid to the operator if this was done. The agreement has never been implemented by the Ministry and it says that in hindsight it was a bad decision on its part to allow the turbines. The Ministry says their impact does have an adverse effect on the radar images, but this is recognised and managed by the controllers.

Mitigation

7.15 The Ministry's attitude to mitigation is summarised well in a letter of 13 August 2013 to the Comhairle (MoD 41) in response to potential mitigation options put forward. The letter deals with air defence as well as range radar. It concludes with regard to the latter that the turbines will appear as targets on the radar screens. It says that any additional processing of the radar picture is likely to be detrimental to the range safety function, and would have to be assessed, most likely by trial, before it could be accepted. The cost of a trial is likely to be prohibitive to the developer.

7.16 Blanking the turbines on the screen is a solution used elsewhere, for example on air traffic control radar at Aberdeen airport. The Ministry says that this is for a different type of radar, and different operating circumstances where aircraft use secondary surveillance radar transponders. It should be noted that secondary here does not imply a less important system – it denotes radar responding to a signal put out by the aircraft rather than to the physical presence of the aircraft in the sky as with primary radar.

7.17 The Ministry states that blanking covers an area larger than the turbines and that the gaps created within six nautical miles of the danger area would have to be monitored. That distance represents only one minute's flying time for the type of aircraft used on the scheduled services into Benbecula airport. The gaps lead to an increase in operator workload as the loss of awareness in the blanked area impacts on their ability to predict what an aircraft is likely to do. Blanking is not considered acceptable mitigation for the range radars.

7.18 The concept of switching off the turbines - as referred to above for Loch Carnan – is acknowledged by the Ministry as potentially having merit for the range radar. In reality it is considered as impracticable as the periods of deactivation may be long lasting and frequent. The Ministry has a high confidence of increasing operations at the range to support future requirements, necessitating longer shut down periods. It says reassurance cannot be provided to the applicant as to how

often the turbines would have to be stopped. Switching off for short periods of time is not therefore acceptable.

7.19 Relocating the turbines is not a viable option as a potential alternative site is close to an ancient monument and largely within a site of scientific interest. There is also no road or grid connection. Reducing the size of the turbines would also seriously damage the viability of the project. Also such action would not remove the turbines from radar visibility. The QinetiQ report assessing the windfarm impact, dated June 2013 (unnumbered – on file) reaches the same conclusion. These are not therefore viable options.

7.20 Range radar experts have operationally assessed the impact of the proposed turbines would have and decided they cannot be operationally mitigated. This is effectively confirmed by the QinetiQ report just mentioned.

Radar conclusions

7.21 The above is a necessarily brief summary of the evidence presented in documents and discussed at the hearing. There was considerable detailed discussion on the interactions on the radar screens between the images of wind turbines and other moving objects, primarily in the air but also at sea and on land. This is all set out in the accompanying documentation but none of it departs from the fundamental fact that wind turbines, as agreed by parties, will show on the radar screens at range control and potentially conceal air activity that could raise issues for range safety.

7.22 Ultimately it has not been possible for me to find specific parameters that would enable me to judge the accuracy of the Ministry's own expert judgements. When questioned in detail at the hearing about aspects of the radar's performance, and thus its effect on the screen picture the response was often that this was not discussed in public for reasons of national security. Nor was it possible for me to obtain information on the thresholds applied in assessing any particular application. The general response is that this varies according to individual circumstances.

7.23 The Ministry's own technical report assessing the proposal (MoD17) is not particularly helpful. It simply refers to the known facts that windfarms can desensitise radar and appear on the radar screen as a moving aircraft. It says that if the proposed site is in an area of vital air traffic operations controlled by the radars at St Kilda these grounds should be considered as the basis of an objection. The principal air traffic within danger area D701E, within which the proposed site is located, is that using Benbecula airport. This traffic does not fall within the remit of the range. Also, as D701E is clearly not in active use it does not appear that the air traffic using it presents any danger. I do not consider that the technical assessment report necessarily provides a convincing basis for an objection to the proposals, as it effectively leaves it to further assessments to reach a firm conclusion.

7.24 Despite this, given the lack of technical parameters, at least those available to the public, taking the Ministry's evidence at face value I am bound to conclude that the turbines could have an adverse effect on range operations.

7.25 It is clear to me that the key issue is the role of the radar operator. In particular the extent to which they are able to take into account the presence of the turbines and make accurate value judgements in relation to the impact they have in potentially obscuring an object, most likely an airborne one, which could potentially cause a threat to range activities resulting in these having to be shut down, or, at worst an airborne collision with unknown consequences.

7.26 I am in no doubt from what I saw at the range control that these are genuine issues and not to be taken lightly. In the specific circumstances of the Hebridean range it is clear to me that the principal areas of concern are the seaward danger areas that are also covered by the two marine radars. The fact that the D701E primarily landward danger area has not been activated for such a long time also suggests that the threat of a range closing incursion in this area is very slight. Indeed it was admitted by the Ministry at the hearing that the chances of an event taking place that would threaten the range were extremely small, albeit that it could happen. As noted above, the potential worst case consequences of this would be of unknown. In the event of a mid-air collision the outcome could however be extreme.

7.27 At present the range functions with the close presence of three large turbines at Loch Carnan. Whilst the Ministry admits that it made an error in not objecting to these I note that it has not invoked the shutdown agreement it has with the turbine operators. This suggests that their impact on the radar may be manageable by the controllers, using their experience and judgement, whilst accepting that is an addition to their workload that they could arguably do without.

7.28 Following from this the two proposed turbines, which are fractionally closer to the St Kilda radar head than the Loch Carnan ones, would present a potential additional problem to the radar operator, in effect a cumulative impact. Whether this would be 'unmanageable' as the Ministry claims is difficult to assess. Ultimately, however, I do not have sufficient technical evidence to judge this and must rely on the opinions, as much as the facts, before me.

7.29 Taking into account therefore the Loch Carnan situation just described, I have taken into account the evidence of the applicant's very experienced former naval air traffic controller, as referred to above, which came over as credible and reliable. Against this I have the evidence of the present range controllers who are also highly capable, experienced and credible. Whilst it may be the case that an air-traffic controller has not been distracted by a wind turbine image, there is always a first time. It is agreed that the proposed turbines would create an image on the radar screens, leading to clutter. Although the clutter from the Loch Carnan turbines may be manageable, I am not fully persuaded that the additional impact of the proposed Locheport development would be.

7.30 If it is not, and if an incident should occur, however unlikely, the consequences of this could be so severe that the risk should not be taken. I accept therefore that the impact of the proposed development would be unacceptable in terms of defence interests.

Landscape and visual impact

7.31 Although an environmental statement was not required the applicant has produced a comprehensive landscape and visual impact assessment. Its scope meets the standard set by Scottish Natural Heritage for projects which do not require a formal environmental impact assessment, including a maximum of three wind turbines. It provides clearly set out information, including visual montages, which enable me to make my own considered judgement regarding the landscape and visual impact of the proposal.

7.32 Also, as part of my accompanied site inspections we viewed the proposed site from the memorial on the A865 road about a kilometre north-west of its junction with the A867 at Clachan. From this slightly elevated position we were able to the context of the site within the wider landscape. I also visited the site itself unaccompanied.

7.33 Regarding landscape impact Criongrabhal is a low, rounded hill, with a summit of 39 m. It lies within the area classified as Boggy Moor 1 in The Landscape Capacity Study for Onshore Wind Energy Development in the Western Isles. This has a low to medium sensitivity to wind farm developments. The site itself is unimproved grassland with a moorland appearance. It overlooks Loch Euphort to the east, which extends some 10 kilometres to the east coast of North Uist. The nearest settlement lies on the coast, approximately 750 metres to the south-west, at Clachan na Luib.

7.34 There are no landscape designations covering the site. The boundary of the South Lewis, Harris and North Uist national scenic area runs approximately south-east to north-west from the entrance to Loch Euphort to Rubha Ghriminis, passing some five kilometres north of the proposed site.

7.35 Seen from the A865 the site is unremarkable. It appears within a wide open landscape setting, with the relatively low shallow sided hills to the north, rising to 230 metres at Maireabhal, about five kilometres distant, providing the main visual attraction, as well as marking the southern edge of the national scenic area. Farther to the east, at 10 kilometres distant, the slightly higher and steeper Lì a Deas (281 metres) and Lì a Tuath close the view just to the north of the entrance to Loch Euphort. Between the two sets of hills the landscape is low lying and gently undulating, with numerous freshwater lochs that appear at least on the Ordnance Survey 1:50 000 map to take up over half the area.

7.36 The zone of theoretical visibility shows that the turbines would clearly be visible from a large part of North Uist, including a considerable part of the national scenic area. The landscape and visual impact assessment submitted by the

applicant concludes that: “the proposed turbines can be accommodated within the existing landscape without resulting in any unacceptable change to landscape character and views and without creating uncomfortable comparisons of scale or introducing new elements which would conflict with the existing patterns in the landscape.”

7.37 The photo montages show that from most viewpoints the turbines would be seen predominantly above the skyline. Given the wide, open scale of the landscape I consider they could easily be accommodated without detracting significantly from the overall scale. This would apply from which ever direction they are seen from. Although seen from a considerable part of the national scenic area, much of this is relatively inaccessible because of the interconnected water bodies. Views would be from some distance and would not, in my opinion, affect the integrity of the national scenic area itself.

7.38 I note no concerns were raised by Scottish Natural Heritage in relation to this. Given the low level of wind energy developments in the area the Comhairle also considers cumulative impact is not considered significant in relation to the proposal. I agree with these opinions, and consider the landscape impact would be acceptable.

7.39 As far as visual impact is concerned the proposed site is outwith the rural settlement of Clachan na Luib, approximately 600 metres north-east of the nearest residential dwelling there, and not within its principal line of sight. Apart from properties within Clachan most other properties that could potentially be affected are well over a kilometre from the site.

7.40 Within the settlement the landscape and visual impact assessment considers the sensitivity to be high, but with a moderate and not significant level of impact. For more distant properties it is considered that scale of the landscape is such that it has the capacity to accommodate the turbines and that the visual amenity of those properties closest to the site would not be affected. I would add there could be some effect, but not to an extent that could be considered significant. Overall I consider the visual impact to be acceptable.

Natural history impact

7.41 The only potential adverse impact brought to my attention is that of the proposed development on the nearby Mointeach Scadabhaig Special Protection Area. This is classified because of its populations of black and red-throated divers. Scottish Natural Heritage has stated that in its view it is unlikely that the proposal would have a significant effect on any of the qualifying interests, either directly or indirectly. It says an appropriate assessment is therefore not required in terms of the European habitats regulations. I have no evidence before me to suggest an alternative outcome, and I accept Scottish Natural Heritage’s view that an appropriate assessment is not necessary.

Cultural and historic interest

7.42 Historic Scotland has identified four scheduled monuments between 2.1 and 2.8 kilometres of the proposed site, two stone circles and two chambered cairns, these being the closest ones to the site. There is also a listed building, the local war memorial, that would be located approximately 810 metres from the nearest turbine base. Although Turbine 1 would be fairly prominent from this location the monument, which stands slightly higher than the A867 on its north side, close to Clachan, would be seen largely against Criongrabhal. There are also a number of historic sites relating to the settlement of Clachan na Luib, but none of these sites are currently scheduled and are therefore not considered to be of national importance.

7.43 The zone of visual influence indicates that between two kilometres and five kilometres, both of the proposed turbines would be visible from twelve scheduled ancient monuments, and at least one of the turbines will be visible from a further two monuments. The study also indicates that both of the proposed turbines would be visible from four listed buildings between two and five kilometres from the proposed site. As the distances increase the impact on the monuments would decrease. Unlike landscape, however, the wide open landscape, which could accommodate the turbines, makes intervisibility with the monuments more likely.

7.44 I have noted Historic Scotland's comments regarding the view expressed in the landscape and visual impact assessment that the impact on the setting of some of the monuments would be lessened because they are relatively infrequently visited or are inaccessible. I accept this concern. The number of visitors and its accessibility does not affect the physical relationship between the monument and the proposed turbines. The fact that a site is scheduled is an indication of its national importance. This is not affected by visitor numbers or accessibility.

7.45 Historic Scotland has also asked for potential mitigation to be considered on the grounds that whilst national interest, on a finely balanced judgement, does not justify an objection, there remain concerns about the impact of the proposals on the scheduled monuments. I have not pursued this further because of the over-riding concerns of the Ministry of Defence, as a refusal of the application would mean additional work and expense that may not be necessary. In the event of permission being granted this could be considered further.

7.46 The Comhairle has also noted possible early prehistoric sites within the boundaries of the proposed development and recommended that ground disturbance works avoid these sites and that an appropriate buffer zone is established around the remains in order to protect them during on-site work. The Comhairle recommends that an evaluation is carried out in advance of ground disturbance works in order to ascertain whether any further archaeological remains, deposits or features are preserved beneath the ground surface. I accept this, which can be dealt with by condition.

Noise

7.47 The Comhairle had originally expressed concerns about a lack of information regarding noise from the proposed turbines. As noted above a comprehensive assessment prepared by professional consultants has concluded there would be no negative impacts associated with the construction or operation of the proposed turbines.

7.48 I note that the impact of noise generated during the construction of the turbines is considered in relation to established guidance and noise limit values. Predicted noise levels are derived from published British Standard noise data for typical construction plant and activities.

7.49 The assessment of noise from the operation of the turbines is undertaken in accordance with best practice policy and guidance. Predicted noise levels are derived from the manufacturer supplied published noise output data for the proposed model of turbine in relation to established noise level limits.

7.50 The report follows the framework set out in 'The Assessment and Rating of Noise from Windfarms' (ETSU-R-97) taking into account the guidance in the Institute of Acoustics paper 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise'. This has been endorsed by the Scottish Government as representing current industry good practice.

7.51 The report analyses the predicted impact at the four noise sensitive receptors closest to the turbines. These are Caberfeidh, Hamersay, DOM and Tighe na Drochaid. I have examined the figures and accept the report's conclusions that there would be no negative impacts associated with the construction or operation of the proposed turbines. These conclusions have not been challenged. In the event of the application being approved the noise conditions proposed by the Comhairle should be imposed as a fall back in the event of any unexpected problems. I do not anticipate that any should arise.

Transport

7.52 The Comhairle has noted that further discussions will be required regarding access routes and road widening schemes, if necessary, to accommodate the necessary large loads. This would be subject to relevant road traffic orders, but I see no reason in principle why the required access could not be obtained. Off road access to the site is by an upgraded track and there do not appear to be any difficulties regarding the junction with the A867.

Aviation

7.53 Neither National Air Traffic Services nor Highlands and Islands Airports Limited, which operates Benbecula airport, had any objections to the proposals. Highlands and Islands Airports have asked for red obstacle lights to be fitted to the turbines at hub height and this could be dealt with by condition.

Other matters

7.54 The turbines would be far enough away from any properties for shadow flicker not to be a problem. Any issues relating to television reception could be dealt with by condition. There would be no impact on local water supplies. No other matters of any consequence have been raised.

The development plan

7.55 The development plan taken as a whole is supportive of renewable energy, and of the general thrust of the proposed development in terms of supporting local economic activity.

7.56 Policy 1 – Development Strategy. As the proposed site is outwith the rural settlement of Clachan na Luib any potential impact on residential amenity is minimised and would not be significant. I have found that the overall scale of the landscape could accommodate the two proposed turbines without serious impact. The detailed design and layout do not present any issues. There are some concerns of archaeological and cultural heritage matters over which some mitigation should be considered in the event of the application being approved. Overall I am satisfied the general principles of the policy are complied with.

7.57 Policy 19 – Energy Resources. 7.34 This is the key specific relevant policy, which gives overall support. This is heavily qualified however, and proposals are required to demonstrate, amongst other things, no unacceptable adverse impact, including cumulative, on defence systems.

7.58 The range radar system is clearly part of a defence system in so far that it facilitates the testing of weapons systems used for defence. It is not part of the air defence radar system at South Clettraval, on which the Ministry initially based part of its objection, before withdrawal. I have found above, however, that on balance the proposed development would be unacceptable in terms of national security because of the potential adverse impact on the radar systems used to control the Hebridean range. I must agree, therefore, with the Comhairle's officials that the proposal is contrary to the development plan.

7.59 Policy 34 – Archaeology. Matters relating to the site itself can be dealt with by a condition requiring investigations to be carried out before work commences. The scheduled monuments within the vicinity of the proposed development would have their setting adversely affected by the proposals. As Historic Scotland has advised that the effects are not significant enough to warrant an formal objection on grounds of national interest, and that there are measures that could be employed to mitigate against these adverse effects, I am satisfied that the proposals need not be contrary to the policy. Mitigation would have to be agreed in the event of planning permission being granted.

<u>Development plan supplementary guidance for wind energy development</u>

Strategic policies

7.60 Policy 1 - Broad Areas of Search. Although the proposed site does not lie within any of these areas, the policy expresses particular concern about conflict with defence resources. The policy does not prevent the development of proposals that concern sites outwith the search areas.

7.61 Policy 2 – Areas of Potential Constraint. This applies to developments over five megawatts, so is not relevant in this case where the proposed output is 1.8 megawatts.

7.62 Policy 3 – Areas of Significant Protection. The site is not within any designated area. Although close to a national scenic area, and special area of conservation I am satisfied from the evidence provided that there would not be any significant impact on these.

Development criteria policies

7.63 Policy 1 – Natural Heritage. Scottish Natural Heritage advised that an appropriate assessment was not required in this case as there were unlikely to be any adverse effects on the qualifying interests of red and black throated divers within the special area of conservation. I have alreadystated above that I agree with these conclusions. Similarly there were no concerns regarding the impacts on the national scenic area, and my own observations during site inspections bear this out.

7.64 Policy 2 – Landscape and Visual. I have found that the landscape impact would be acceptable and that there would be no undue impact on residential amenity caused by the appearance of the turbines. The setting of scheduled monuments has been considered above and can be dealt with by mitigation.

7.65 Policy 3 – Community Amenity. I have found above there would be no adverse impact on residential properties from noise or shadow flicker. Electromagnetic interference can be dealt with by condition.

7.66 Policy 4 – Water Resources. There are no implications for the public water supply from the proposed development.

7.67 Policy 5 – Historic Resources. As set out above, potential adverse impacts on the setting of scheduled monuments can be dealt with by mitigation to be agreed in the event of planning permission being granted.

7.68 Policy 6 – Aviation and Defence. Although civil aviation would not be affected by the proposals, subject to turbine lighting, I have found out above this would not be the case with defence interests. The adverse impact on the operation of the Hebridean range radar would clearly be contrary to the policy.

7.69 Policy 7 – Cumulative Impact. There are relatively few wind energy developments in the area, and I have found there would not be any significant cumulative impact.

7.70 Policy 8 – Soil Resources. It is not anticipated there would be any issues arising relating to soil resources and peat movement that could not be dealt with by condition.

7.71 Policy 9 – Planning Obligations. Under the policy, as the proposed development would be more than one megawatt a planning obligation under section 75 of the Town and Country Planning (Scotland) Act 1997, as modified, would be necessary to guarantee land restoration and decommissioning.

7.72 Taking the development plan as a whole I found nothing that could not be resolved through mitigation, agreement or conditions that would prevent the proposed development complying with the development plan, other than defence related issues. The evidence before me is clear however, for the reasons set out above, that the potential impact of the proposed development on the radar used to manage the Hebridean range would be unmanageable, and therefore unacceptable.

7.73 This application therefore does not comply with Policy 19 - Energy Resources (part b) of The Outer Hebrides Local Development Plan, Supplementary Guidance for Wind Energy Development Policy 1, and Development Criteria Policies DC2, 3, 5 and 6. It does not therefore accord with the development plan.

Government policy

7.74 The Scottish Government's policies give strong and clear support to schemes such as the proposed development that would increase the amount of electricity generated from renewable sources. This support is not over-riding although paragraph 169 of Scottish Planning Policy effectively leaves it to development management to assess those issues listed that should be taken into consideration. The clear implication is that there should be no unsatisfactory impacts on defence interests, and in that respect, if accepting the Ministry's judgement, policy is not supportive of the proposal.

Other material considerations

7.75 The other material consideration of significance in this case is the benefit to the local community that would be derived from this scheme.

7.76 In its closing remarks at the hearing the applicant referred to the major problem of depopulation in the Western Isles, and North Uist in particular. The development company was set up to promote development, with the overall objectives as set out above.

7.77 The project to develop renewable energy through the two turbines is seen as the best way of providing income that can be invested directly for the benefit of the local community. This would be controlled by the community and lead to lasting benefits specifically for North Uist in a way that is environmentally sound and provide

for a better more sustainable future for its inhabitants. This should not be lightly dismissed.

Conditions

7.78 The Comhairle has provided a list of 25 generic conditions for wind turbine development to be imposed in the event that the Scottish Ministers decide to grant planning permission.

7.79 I have assessed these for compliance with circular 4/1998 regarding the use of conditions in planning permissions. I have deleted two relating to blasting because of repetition, and subject to editing and some redrafting to make them relevant to this proposal find they comply with the circular. Also I have not accepted that final decommissioning proposals should be put forward at this stage as circumstances can change within the 25 year life of the development. The conditions to be imposed, together with advisory notes and informatives requested by the Comhairle, are set out in appendix 1.

7.80 The Ministry has stated that it does not believe conditions can make the proposal acceptable.

8. CONCLUSIONS AND RECOMMENDATION

8.1 Based on the discussions at the hearing, the documentation provided with the application, in response to consultations, and that provided to the hearing, other written submissions, and the site inspections, I consider that the determining issues in relation to the application for planning permission are the impact of the proposed development on the operation of the Hebrides range air radar systems, taking into account the provisions of the development plan and other material considerations.

8.2 For the reasons set out above, and particularly at paragraphs 7.1 to 7.30 regarding the impact of the proposed development on the operation of the Hebrides range air radar systems, and specifically 7.55 to 7.73 regarding the development plan, I find the proposed development does not accord with the provisions of the development plan.

8.3 The effects of issues other than radar, however, from the proposed development are either in accordance with the development plan, or can be made so through conditions or appropriate mitigation.

8.4 For the same reasons relating to radar, and with specific regard to paragraph 7.74 regarding Government policy, I find the proposal is not supported by Scottish Planning Policy.

8.5 In reaching these conclusions I have considered very carefully the evidence before me. In particular I have considered the benefits that would derive from the proposal in terms of the North Uist community and the opportunities it would provide to stem population decline and stimulate the local economy. My final conclusion is a matter of careful judgement.

8.6 Whilst the Ministry claims that the impact of the proposed development would be unmanageable, it also accepts the likelihood of an incident occurring would be very small. If however the impact of the proposed Locheport turbines on the radar, with resultant increased workload for radar operators, and therefore the greater likelihood (my words) that an error could be made, this could result in an emergency shutdown of range activities, or at worst a collision. Despite the evidence it is unlikely to occur, it remains a possibility, with potentially very serious effects if it did happen.

8.7 I accept there would be significant benefits for the local community to be derived from the proposed development. In other circumstances such a material considerations could indicate that planning permission should be granted for a proposal that is otherwise contrary to the development plan.

8.8 I conclude however that despite the arguments being finely balanced the strength of the defence case must override the support of other material considerations for a development that is contrary to the development plan and that planning permission should be refused.

8.9 Also in the event of planning permission being granted further consideration should be given to mitigation regarding the impact on scheduled monuments and to whether a planning obligation is necessary regarding decommissioning. The latter is a requirement in normal circumstances under development criteria policy 9 of the supplementary guidance, as the two turbines would have an output of 1.8 megawatts. Due to the importance of the defence case in recommending refusal of the application I have not sought further views on this.

Recommendation

8.10 I recommend that the Scottish Ministers should not grant planning permission for the proposed development. If, however, Ministers are minded to grant permission, it should be subject to the relevant conditions set out in Appendix 1.

8.11 In the event of planning permission being granted Ministers should direct that unless the development to be permitted has already begun, the permission will lapse after a period of 3 years beginning with the date of the permission. The direction replaces section 58(1) of the Town and Country Planning (Scotland) Act 1997 (as amended) for the permission, that section of the Act not applying to permissions granted for a limited period such as this one.

Trevor A Croft

Reporter

APPENDIX 1 PROPOSED CONDITIONS TO BE IMPOSED IN THE EVENT OF PLANNING PERMISSION BEING GRANTED

1. The planning permission for the wind turbines shall be for a maximum period of 25 years from the date of the final commissioning of the turbines on site. Written confirmation of the date of the final commissioning of the turbines shall be provided to the planning authority and Scottish Ministers no later than one calendar month after that event.

Reason: to define the duration of the planning permission.

2. No ground disturbance shall take place until the applicant, or its agents or successors in title have secured the services of a professional archaeologist to implement a program of 10% evaluation works and where appropriate mitigation and publication, in accordance with a written scheme of investigation, including a timetable for the investigation. The written scheme of investigation should be submitted by the applicant at least 14 days prior to the proposed commencement date and approved in writing by the planning authority. The approved scheme of investigation shall be implemented subject to any variations agreed in writing by the planning authority.

Reason: to mitigate the impacts of the development on the archaeological resource of the area, and enable the maintenance of the archaeological record in the Western Isles, in accordance with Outer Hebrides Local Development Plan Policy 34.

3. A scheme for the reinstatement of the site after construction shall be submitted to and approved in writing by the planning authority before development commences on site. The scheme shall include provision for the surface of the tower bases to be at least 0.5 metres below adjacent land surface levels and for the surface of the base to be covered with peat and seeded, except for vehicular access and cranage areas; and shall include for reinstatement of the edges of the access tracks to leave them at the minimum width needed to allow necessary service access during the operational period.

Reason: to secure the satisfactory development of the site in the interests of the visual amenity of the area.

4. The development approved shall be carried out in accordance with the approved scheme referred to condition 3 and shall be carried out within 12 months of commissioning of the turbines, unless any variation of the approved scheme has been agreed in writing by the planning authority beforehand. The approved reinstatement scheme shall then be maintained throughout the life of the development.

Reason: to ensure the implementation of the approved landscaping in the interests of the amenity of the area.

5. All cabling and transmission lines within the site shall be buried underground. Full details of the route of all cabling on site and details of all work, including restoration works, shall be submitted for the written approval of the planning authority prior to the commencement of development on site. Reinstated shall be carried out within six months of completion of the said works in accordance with the approved details, to the satisfaction of the planning authority.

Reason: for the avoidance of doubt and to safeguard visual amenity, landscape, natural and built heritage resources.

6. The wind turbines herby granted planning permission shall be removed from the site and the use discontinued on or before the expiry of the 25 year permission referred to in condition 1. The applicant or its successor shall within one month of the expiry of the 25 year permission referred to in condition 1, or earlier if the turbines are removed earlier, submit a decommissioning and restoration method statement to be approved in writing by the planning authority. The decommissioning method statement shall include details of the restoration of the site and the time period over which such restoration shall take place. The land shall be fully reinstated in accordance with the agreed details and timescale, to the satisfaction of the planning authority.

Reason: to safeguard the natural qualities of the site.

7. Within six months of the cessation of regular use of either of the wind turbines, the turbine(s), associated hardstanding, any other fitments associated with the development shall be removed and the site restored in accordance with a scheme of decommissioning to be approved in writing by the planning authority. For the purpose of defining, the cessation of regular use shall be defined as not being in use for a continuous period of six months.

Reason: to safeguard the natural qualities of the site.

8. No part of the development to which this planning permission relates shall commence until the following details have been submitted to and approved in writing by the planning authority:
(a) a construction method statement;
(b) the timescale of the construction works; and
(c) a transportation management plan.

Reason: these details are required to allow the planning authority to properly assess and control the proposed development in order to safeguard the natural qualities of the site and the amenity of the wider area.

9. In the event that any blasting is required to implement the development to which this planning permission relates, this shall not commence until details of the methods for any blasting (to include a method statement from a qualified shot blaster) which are to be undertaken to prepare the site have been submitted to and approved in writing by the planning authority. Any blasting on the site shall be

undertaken in accordance with the details approved in compliance with this condition unless agreed otherwise in writing by the planning authority.

Reason: to safeguard the safety and amenities of people and structures in the area.

10. Details of the methods and locations for measuring any blasting which is to undertaken to prepare the site shall be submitted for approval in writing by the planning authority before blasting takes place. The approved details shall then be implemented on site and followed throughout the period of blasting to the satisfaction of the planning authority.

Reason: to safeguard the safety and amenities of people and structures in the area.

11. Following compliance with Conditions 8 and 9, the results of the first blast shall be referred to the planning authority and no further blasts shall be undertaken until the planning authority has indicated in writing that it is satisfied with the blasting methods being used. Thereafter blasting shall continue in accordance with these methods throughout the period of blasting to the satisfaction of the planning authority.

Reason: to safeguard the safety and amenities of people and structures in the area.

12. The wind turbines shall be finished in a pale grey colour in a matt finish, or similar, to be agreed in writing with the planning authority prior to work starting on site. The colour and finish of the wind turbines shall not be altered thereafter without the written consent of the planning authority.

Reason: to reduce the impact of the turbine and minimise reflection to protect visual amenity.

13. No symbols, signs, logos, or other lettering (other than those required for health and safety reasons) shall be displayed on any part of the turbines nor any other buildings or structures without the written consent of the planning authority.

Reason: in order to minimise the visual impact of the proposals to protect visual amenity.

14. Unless agreed otherwise in writing beforehand by the planning authority, construction work, (including any form of quarrying, blasting, crushing or batching) shall take place only within the hours of 0700 to 1900, Mondays to Fridays and from 0700 to 12 noon on Saturdays and not at all on Sundays. Any construction activity involving audible noise at the nearest noise sensitive property, from cutting, hammering or welding, shall be subject to the foregoing hours, unless specific exceptions have received the prior written approval of the planning authority.

Reason: to protect the occupants of nearby premises from nuisance caused by noise and disturbance.

15. Unless agreed otherwise in writing by the planning authority, throughout the life of the development to which this planning permission relates, access to the site by heavy goods vehicles shall be restricted to 0700 to 1900 hours on Mondays to Fridays and from 0700 to 12 noon on Saturdays with no such access on Sundays.

Reason: to protect the occupants of nearby premises from nuisance caused by noise and disturbance.

16. During the daytime at wind speeds not exceeding 10 metres per second, the wind turbine noise level at the façade of any dwelling or other noise sensitive premises shall not exceed 35dB LA90, 10min or the Background Noise Level plus 5 dB(A), whichever is the greater. During the night-time at wind speeds not exceeding 10 metres per second, the wind turbine noise level at the façade of any dwelling or other noise sensitive premises shall not exceed 38dB LA90, 10min or the background noise level plus 5 dB(A), whichever is the greater.

In this condition,
"wind turbine noise level" means the rated noise level due to the combined effect of all the wind turbines, excluding existing background noise level but including any tonal penalty incurred under the methodology described in ETSU-R-97 (Department of Trade and Industry, September 1996), pages 99-109.
"Background Noise Level" means the ambient noise level already present within the environment (in the absence of noise generated by the development) as measured and correlated with Wind Speeds.
"wind speeds" means wind speeds measured or calculated at a height of 10 metres above ground level on the wind farm site at the wind monitoring mast nearest to the premises of interest.
"noise sensitive premises" means premises, the occupants of which could be exposed to noise from the wind farm and includes hospitals, residential homes, nursing homes, etc.

Reason: to protect the amenity at noise sensitive premises.

17. At the request of the planning authority, following a complaint from a local resident to the planning authority relating to noise emissions from the wind turbines, the owner of the turbines shall measure, at its own expense the level of noise emissions from the wind turbines. Noise monitoring shall be carried out by a suitably qualified noise expert or consultant previously agreed in writing by the planning authority and which shall be carried out by the method statement stated in section 2.0 "Procedure to be followed in the event of a complaint" page 102 of the publication "The Assessment and Rating of Noise from Wind Farms" (ETSU-R-97, Department of Trade and Industry, September 1996).

Reason: to quantify the loss of amenity at noise sensitive premises resulting from the operation of the wind turbines.

18. Should any noise monitoring undertaken in accordance with condition 16 above demonstrate that the noise thresholds in condition 15 are being exceeded, the

owner shall submit a scheme of mitigating measures to the planning authority for written agreement within three months of the breach being identified. The agreed mitigating measures shall be implemented within three months of the written agreement or within any alternative timescale agreed in writing by the planning authority and thereafter retained throughout the life of the development unless otherwise agreed in writing by the planning authority.

Reason: to ensure adequate mitigation is in place to protect amenity at noise sensitive premises.

19. If the operation of the wind turbines hereby approved causes interference to domestic television reception, the owner shall submit a scheme for the remediation of the interference for the written approval of the planning authority. The approved scheme shall be implemented, at the cost of the owner, and retained throughout the life of the development to the satisfaction of the planning authority.

Reason: to protect television reception for residents in the area.

20. Throughout the life of the development the turbine blades shall rotate in the same direction.

Reason: to protect safety and visual amenity.

21. Micro-siting adjustments to the location of either of the wind turbines will require the prior approval in writing of the planning authority.

Reason: to maintain control over the development.

22. Before development commences details of obstacle lights to be installed at the highest practical point, shall be submitted to and approved in writing by the planning authority. Before the wind turbines become operational, the obstacle lights shall be installed on the turbines in accordance with the approved details. The lights on the turbines shall be retained throughout the life of the development.

Reason: to protect air traffic safety.

Advisory notes

1. **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).)

2. **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).)

3. **Display of notice:** A notice must be displayed on or near the site while work is being carried out. The planning authority can provide more information about the form of that notice and where to display it. (See section 27C of the Town and Country Planning (Scotland) Act 1997 Act (as amended) and Schedule 7 to the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013.)

In addition the Comhairle has asked for the following informatives to be attached to any conditions:

Informatives: these are not planning conditions. They are given for your instruction and help only.

1. This Permission gives consent or approval under Town and Country Planning legislation ONLY. Depending on the nature of your proposals, you may also require to obtain other permissions from the Comhairle such as a building warrant

2. Existing services (such as water mains, electricity wires or telephone lines) shall be protected. You may be liable for any damage that is caused by any works or use associated with the development.

3. It would make sense for you to try to co-ordinate the installation of services. For example, BT could install a cable in the same trench as your water supply or drainage system. Contact the relevant service providers when work is about to commence.

4. If a mobile crushing plant is used on site in conjunction with the proposed excavation of rock it should be brought to the applicant's attention that the plant will require an authorisation under the provisions of the Pollution Prevention and Control Regulations, and SEPA's Stornoway office should be contacted by the applicant at an early stage to discuss this aspect.

5. If the development goes ahead the following information should be notified to Defence Estates:
• Date of commencement of the construction;
• Date of completion of the construction;
• The height above ground level of the tallest structure;
• The maximum extension height of any construction equipment;
• The position of the turbine in latitude and longitude;

6. Existing services (such as water mains, electricity wires or telephone lines) shall be protected. You may be liable for any damage that is caused by any works or use associated with the development. Any advice regarding lines of services which has been received by the Comhairle in dealing with your application is enclosed for your information. This cannot be taken as definitive and must be verified on site and through discussion with the appropriate service providers (e.g. Scottish Water, Hydro Electric or BT).

APPENDIX 2 APPEARANCES AT THE HEARING

North Uist Development Company

Robert Fraser, Chairman

Shane Savage BSc, Managing Director, Wind Farm Aviation Consultants Ltd

Uisdean Robertson, Comhairle member for Beinn na Faoghla Agus Uibhist A Tuath

Ada Campbell, Board member

Ministry of Defence

Douglas Milne LL.B (Hons), Dip.LP, LARTPI, WS Partner, Morton Fraser LLP

Desmond Egan, Senior Safeguarding Officer, Defence Infrastructure Organisation

Flight Lieutenant Hayley Adamson, BSc Hons, RAF, Headquarters 1 Group, Air Defence Safeguarding, Safeguarding Officer for the Ministry regarding Air Defence interests

Kenny MacDonald, Tracking Radar Supervisor, Hebrides Range

Steve Speke, Wind Farm Subject Matter Expert, Air Defence and Air Traffic Systems

Jane Rymell Defence Equipment and Support Weapons TEST Dep Ops Del Mgr

For the Comhairle

Councillor David Blaney

Allan MacDonald, Solicitor

Keith Bray, Planning Officer

Morag Ferguson, Planning Officer

APPENDIX 3 LIST OF DOCUMENTS

Documents for North Uist Development Company

1. WFAC letter dated 18 November 2013.
2. Review of Planning Application on behalf of North Uist Development Company by Case Consulting Limited.
3. 2011 Census Statistics - Outer Hebrides published by CnES - http://www.cnesiar.gov.uk/factfile/population/documents/LACensusProfile2011.pdf
4. Population Projections published by CnES - http://www.cnesiar.gov.uk/factfile/population/projections.asp
5. Consultation for the Ministry of Defence Airspace Change Proposal for the Hebrides Range dated 24th September 2013 and email from Paul Brundle HEBS ACP to Donna Matheson NUDC on 23rd April 2014.
6. Email between Sqn Lr M L Betts and Robert Fraser of 21/01/13 and 20/01/14. Email between Sqn Lr M L Betts and Kathleen MacDonald of Community Energy Scotland of 31/01/13 and 30/01/14. Email between David Naylor-Gray DIO and Robert Fraser of 7/02/13, 9/01/14, 15/11/12 and 13/10/12.
7. NUDC letter to CnES Planning Officer, Ms MacKinnon dated 2nd July 2013
8. NUDC letter to CnES Leader, Mr A Campbell dated 2nd September 2013
9. NUDC letter to CnES Director of Development, Mr CI MacIver dated 18th November 2013.
10. CnES Screening Opinion 10/00386/SCR
11. CnES Screening Opinion 12/00286/SCR
12. CnES Screening Opinion 12/00402/SCR
13. Planning Application 13/00155/PPD and all associated documents including committee reports.

Documents for Comhairle nan Eilean Siar

(i.) Report to the Environment and Protective Services Committee dated 19 November 2013 in respect of the Locheport Application
(ii.) Letter of Objection from the Ministry in relation to the Locheport Application dated 14 May 2013
(vii.) Report to the Environment and Protective Services Committee dated 4 June 2013 re Planning Application by Scottish Water Ref 12/00565
(viii.) Letter from Ministry to the Comhairle dated 5 October 2012
(ix.) Report to the Environment and Protective Services Committee dated 15 April 2014 re Planning Application by Scottish Water Ref 14/0060
(x.) Letter from Ministry to the Comhairle dated 28 March 2014
(xi.) Letter from Wind Farm Aviation Consultants to North Uist Development Company dated 18 November 2013
(xii.) Email from Desmond Egan to Morag Ferguson dated 24 January 2014
(xiii.) Minutes of Meeting between the Ministry and the Leader of the Comhairle and officers dated 28 August 2013
(xiv.) The Outer Hebrides Local Development Plan

(xv.) The Outer Hebrides Local Development Plan Supplementary Guidance for Wind Energy Development

Documents for the Ministry of Defence

NOTE: Missing numbers are document for Dark Island Hotel and Bornish 7 called in applications not relevant to Locheport.

1. Application for Planning Permission for two Wind Turbines at Locheport dated 1st April 2013
2. Letter from Defence Infrastructure Organisation to Comhairle Nan Eilean Siar dated 14th March 2013
3. Report by Director of Development to Environment and Protective Services Committee dated 19th November 2013 (with relevant appendices)
4. Comhairle Nan Eilean Siar Environment and Protective Services Committee Minute of Meeting held on 19th November 2013.
6. Letter from Defence Infrastructure Organisation to Comhairle nan Eilean Siar dated 24th June 2013.
7. Email from Defence Infrastructure Organisation to Hannah Morrison dated 19th August 2013
8. Report by Director of Development to Environment and a Protective Services Committee dated 19th November 2013 (with relevant appendices).
10. Letter from Defence Infrastructure Organisation to Comhairle nan Eilean Siar dated 29 October 2013
11. Report by Director of Development to Environment and Protective Services Committee dated 19th November 2013 – 7 Bornish
12. Letter from Morton Fraser to Directorate for Local Government and Communities Planning and Architecture dated 27th January 2014 (without appendices)
13. Email exchange between Keith Bray and Desmond Egan dated 15th/16th April 2014
17. Air Defence and Air Traffic Systems Radio Site Protection Technical Report ("Report") on Locheport WR80026/01 dated 23rd April 2013
18. CAP 764 Civil Aviation Authority Policy and Guidelines on the Wind Turbine dated 1 June 2013, 5th Version
19. Mitigation of the Impact of Wind Farms on Ministry Missions - Selected Literature Survey - DSTL-DSTL/TR31992V1.0 21st October 2008
20. Report to the Congressional Defence Committees - the effect of Windmill Farms on Military Readiness (2006) - US Department of Defense, Office of the Director of Defense and Engineering
21. Memorandum of Understanding (August 2011 update:) Wind Turbines and Aviation Radar (Mitigation Issues)
22. Guidelines on how to assess the potential impact of Wind Turbines on Surveillance Sensors - Euro Control - Edition 1.1 dated 9th June 2010
23. Wind Farms Impact on Radar Aviation interest - final Report - QinetiQ dated September 2003
24. The effects of Wind Turbine Farms on Air Defence Radars - Ministry of Defence – dated 6th January 2005 (AWC/WAD/72/652/Trials)

25. Further evidence of the effects of Wind Turbine Farms on Air Defence Radar - Ministry of Defence dated 12th August 2005
26. The effects of Wind Turbine Farms on ATC Radar - Ministry of Defence - dated 10th May 2005
27. Location Overview Map of Proposed Developments
28. Overview Map and Status of All Proposed and Consented Developments on North and South Uist
30. Scottish Planning Policy Paragraphs 187 to 191
31. Scottish Government Online Advice on Onshore Wind Turbines (updated 12th December 2013
32. Scottish Government Guidance on Dealing with Aviation Objections and Associated Negative Conditions on Wind Turbine Consents (January 2012)
33. Outer Hebrides Local Development Plan Policy 19 Energy Resources
34. Outer Hebrides Local Development Plan Policy 20
35. Outer Hebrides Local Development Plan Supplementary Guidance for Wind Energy Development
36. Lockheed Martin Data Sheet for FPS-117 Long Range Solid State Radar [another name for Type 92] http://www.lockheedmartin.co.uk/content/dam/lockheed/data/ms2/documents/groundbased-air-surveillance/FPS117_brochure.pdf
37. Email exchange between Morag Ferguson and Desmond Egan dated 22nd 11th 3rd and 2nd July 2013
38. Email exchange between Calum Iain MacIver and Desmond Egan dated 30th and 26th July 2013
39. Letter from Defence Infrastructure Organisation to DPEA dated 9th December 2013
40. Letter from Defence Infrastructure Organisation to Comhairle nan Eilean Siar dated 28th February 2014
41. Letter from Defence Infrastructure Organisation to Comhairle nan Eilean Siar dated 30th August 2013 (with Meeting Minutes 28th August 2013)

Appendix 4

GLOSSARY OF DEFINED TERMS USED BY THE MINISTRY OF DEFENCE

AD Air Defence
ADATS Air Defence Air Traffic Systems
ADR Air Defence Radar
AGL Above Ground Level
ASACS Air Surveillance and Control System
ATC Air Traffic Control
ATS Air Traffic Services
CFAR Constant False Alarm Rate
DIO Defence Infrastructure Organisation
FAR False Alarm Rate
kilometres Kilometre
nm Nautical Mile
m Metre
MINISTRY Ministry of Defence
MOU Memorandum of Understanding
MTI/MTD Moving Target Indication/Detection
NATO North Atlantic Treaty Organisation
PD Probability of Detection
RAF Royal Air Force
RCS Radar Cross Section
RLOS Radar Line of Sight
RRH Remote Radar Head
RSP Radio Site Protection
SME Subject Matter Expert