

WEST DUNBARTONSHIRE COUNCIL

Report by the Executive Director for Infrastructure and Regeneration

Planning Committee: 23 October 2013

DC12/028: Erection of ten wind turbines (max hub height 79m and max blade tip height 120m) with a total installed capacity of around 20MW, and associated works including meteorological mast, control building, ancillary infrastructure, temporary ground works and construction compound on land at Merkins Farm, Auchincarroch Road, Jamestown, Alexandria by Lomond Energy.

1. REASON FOR REPORT

- 1.1** This application is a Major Development and is also subject to a significant number of objections. Under the terms of the approved Scheme of Delegation it therefore requires to be determined by the Planning Committee.

2. RECOMMENDATION

- 2.1** **Refuse** planning permission for the reasons set out in Section 9.

3. DEVELOPMENT DETAILS

- 3.1** The application site is located at Merkins Farm, which is in the western part of the Kilpatrick Hills between Bonhill and Gartocharn. The nearest settlement to the site is Bonhill, which is located 2.5km to the west, whilst Gartocharn is approximately 5km to the north. Dumbarton, Alexandria and Balloch are all approximately 4km from the site, to the south west, west and north west respectively. The site is close to the boundaries with the neighbouring planning authorities of Stirling Council and the Loch Lomond and the Trossachs National Park (LLTNP). In total, the application site area extends to 240 hectares, although within this the actual footprint of the proposed development would only occupy around 3% of the site area.
- 3.2** The site comprises part of Auchenreoch Muir to the east of Pappert Hill, and primarily consists of upland open moor which is currently used for sheep grazing. The topography within the site undulates, and it contains several hills including Knockshannoch and Hill of Standing Stones. These form part of a gently sloping ridge of land which drops down from the higher Doughnot Hill and Meikle White Hill (to the south of the site). This ridge forms the watershed between the Endrick Water (a tributary of the River Leven) and the River Leven itself, and a number of small burns originate within the site, flowing north east and west respectively. The surrounding land comprises open moorland with some patches of coniferous plantation, while Auchincarroch landfill site borders the site to its north west. The application site boundary also incorporates the existing access track from Auchincarroch Road.

3.3 The proposal would involve the following works:

- Installation of 10 large wind turbines;
- Construction of approximately 4.2km of new access tracks within the site;
- Upgrading of approximately 2km of existing farm access track between Auchincarroch landfill site and the application site;
- Construction of ancillary infrastructure, including transformers for each wind turbine, crane hardstanding areas and underground cabling;
- Excavation of up to four borrow pits (small quarries) on the site to provide stone for use in the construction of on-site infrastructure;
- Construction of a control room/substation building; and
- Creation of a temporary construction compound.

3.4 The ten proposed turbines would be three bladed, horizontal axis turbines, each with a nominal rated capacity of 2MW and a rotor diameter of 82m. Overall, the wind farm would have a potential generating capacity in the region of 20MW. The three turbines located on the lowest parts of the site would have a hub height of 79m and a maximum height to the blade tip of 120m, whilst the seven turbines on higher ground would have a hub height of 69m and a maximum height to the blade tip of 110m. All of the turbines would be located on ground at elevations of between 231m and 265m Above Ordnance Datum (AOD). The tubular towers would be constructed from steel and the blades will be made from glass fibre-reinforced epoxy, all finished in a non-reflective pale grey colour consistent with the industry standard used in most other UK wind farms. The turbines would rotate and generate power at wind speeds between 3.5m/s (8mph) and 25m/s (56mph). When operating, the blades automatically change in pitch, and rotor speed would vary to maximise energy output at varying wind speeds. At wind speeds of greater than 25m/s (56mph), the blades would be feathered and the turbines shut down.

3.5 Each turbine would sit on a concrete base roughly 16m in diameter, with a depth of approximately 2.5m, although the exact design of the foundation would depend upon which specific manufacturer's turbines were used (which is not known at this stage). In addition to the foundation, an area of hardstanding of approximately 52m by 20m would be required adjacent to each turbine as a platform for cranes to lift the turbine components into position. Once the turbines become operational, such hardstanding would provide safe access for maintenance and repairs which may also require the use of a crane. Adjacent to the base of each turbine would be an external transformer measuring approximately 2m x 2m and coloured either green or pale grey to minimise their visual impact.

3.6 A building containing the control room, store and electrical substation would be built adjacent to the access track, north west from where the wind turbines will be located. This building would be a simple linear single storey structure covering 700m², finished with a pitched roof, fronting onto an area of hardstanding. The turbines will be connected to the on-site control building located alongside the main site access by means of underground cable.

From here, the wind farm will be connected to the local 33kV electricity distribution network via underground cable to Strathleven, south of Bonhill. This connection will be the subject of an application if required, under Section 37 of the Electricity Act 1989 to the Scottish Government, which will be the subject of consultation with the Council as Planning Authority.

- 3.7** The only site access would be by way of Auchincarroch Road and the existing access track to Auchencarroch landfill site, both of which already accommodate significant heavy goods vehicle movements and would require minimal alteration. South of the landfill site, an existing 2km farm access track leading to the application site would be upgraded, while 4.2km of new access track would be created within the site to access the individual turbines. The new and upgraded tracks would be 5m wide and surfaced in hardcore, with appropriate passing places and widened areas at bends to permit the turning of long vehicles. It is anticipated that materials brought to the site during construction would enter West Dunbartonshire via the A82 and the application has been accompanied by a routing strategy. Within the site, a temporary compound would be formed on the access road, to store materials and portable buildings required during the construction phase and provide car parking. Tracks and hardstanding areas within the site would be drained in accordance with sustainable urban drainage systems principals, with the use of swales to intercept and filter run-off. Further measures which may be required as a result of the construction activities include the provision of settlement lagoons and retention ponds, exact details of which would be required prior to the commencement of any work on site. The construction phase of the development is estimated to take up to 10 months and would involve between 10 and 30 workers, with an average of 20 persons on site at any one time. In the longer term, it is expected that once completed and operational, there would be 3 or 4 full time employment opportunities created. Permission is sought for a period of 27 years with approximately one year for construction, 25 years with the wind farm being operational and a further year for decommissioning of the site.
- 3.8** In order to more accurately gauge the wind speed and direction at the application site, permission (DC10/112) was granted for the erection of a 60m anemometer mast which was consented in 2010 for a three year period. This has been erected on site and is operational. The anemometer mast is lit by a red obstacle warning light and is visible at night.
- 3.9** The application has been submitted by a local company and included with the submission was an Environmental Statement (ES) covering topics which include ornithology, noise and vibration, ecology, hydrology, hydrogeology and peat stability, landscape and visual amenity, cultural heritage, access, social and economic impacts.

4. CONSULTATIONS

- 4.1** Scottish Natural Heritage (SNH) objects to the proposal on the grounds that it would have an adverse impact upon the integrity of Loch Lomond and the Trossachs National Park (LLTNP) and the Loch Lomond National Scenic Area (NSA). They do not consider that this adverse impact could be mitigated by adjustments to the layout or scale of the wind farm. The proposal lies within 2km of LLTNP and 4km of the Loch Lomond NSA. It would introduce a large, highly visible wind farm into the southern backdrop to Loch Lomond, a landscape which is currently free of wind farm development and which provides an uninterrupted natural skyline and setting for many iconic and popular views. In so doing it would damage several of the Special Landscape Qualities of the LLTNP and Loch Lomond NSA. SNH advise that the proposal would also have unavoidable, significant adverse affects on the regionally important landscape and recreational enjoyment of the Kilpatrick Hills Regional Scenic Area (RSA).
- 4.2** SNH further considers that from the southern part of the NSA and LLTNP, the wind farm site is seen as part of a ridge that forms a defining horizon in many of the area's panoramic or iconic views. The landform provides a backdrop for those views and it is not affected by large built structures. It is perceived visually as a natural southern boundary to LLTNP. The wind farm would change this important landscape characteristic due to the location of the turbines on the defining 'ridge', their prominence, and their dominant vertical scale relative to the low hills they would stand on. Therefore SNH consider that the wind farm would significantly detract from the dramatic scenery and setting of the NSA and LLTNP.
- 4.3** These affects would be greatest within 10-12km of the proposed site, which includes much of the southern part of Loch Lomond. In this area the Loch is at its widest, most accessible, and most heavily visited. It is especially famous for its unique, dramatic landscape expression of the geological Highland Boundary Fault Zone. SNH consider that the proposed turbines would intrude into, and significantly detract from, many highly valued, iconic and spectacular views that are important to both visitors and residents. Such views are experienced both on the Loch and in/around major visitor destinations in the surrounding area.
- 4.4** The Royal Society for the Protection of Birds (RSPB) has no objection to the proposal subject to conditions and/or a Section 75 Planning Obligation to secure the preparation and implementation of a suitable Habitat Management Plan, and the appointment of a suitably qualified Ecological Clerk of Works during construction activities.
- 4.5** The Scottish Environmental Protection Agency (SEPA) has no objection to the proposal subject to conditions relating to the approval and implementation of a suitable Waste Management Plan and a Surface Water Management Plan. In relation to ecology, SEPA notes that many of the species present on the site are likely to be highly dependant on groundwater, and the impact of the development upon groundwater dependant terrestrial ecosystems would be

reduced if turbines 2, 3 and 6 were repositioned. If this is not feasible, SEPA recommends that the Habitat Management Plan should include specific details of measures to replace or enhance existing water-dependant species.

- 4.6** West Dunbartonshire Council Environmental Health Service has no objection to the proposal subject to conditions relating to noise from operational turbines and shadow flicker, and further conditions relating to noise, hours of work, blasting and dust control during the construction period.
- 4.7** The Scottish Government Environmental Quality Division has no comments on the Environmental Statement.
- 4.8** Historic Scotland has no objection to the application. Comments have been provided on the impact of the development upon scheduled monuments, category A listed buildings, and the inventory of gardens and designed landscapes. Historic Scotland agrees with the Environmental Assessment's conclusions that the impact on the listed Balloch Castle, its associated designed landscape, and the scheduled cairn at Stockie Muir would all be minor. In relation to the scheduled cairns at Gallangad Muir and Gallangad Burn, Historic Scotland considers that the impact on the setting of these monuments would be more significant, especially if existing forestry plantations were to be removed, however such impacts are not considered to be sufficient to warrant an objection.
- 4.9** The West of Scotland Archaeological Service has no objection to the application subject to a condition which requires the implementation of a programme of archaeological works on the site prior to the commencement of development. The proposal would have a minor detrimental impact upon two nearby scheduled cairns at Gallangad Muir and Gallangad Burn. There are recorded archaeological sites within the application site and within the surrounding area, and any further archaeological features disturbed by the development should be properly recorded.
- 4.10** West Dunbartonshire Council Roads Service has no objection to the proposal. Based on the abnormal loads route assessment accompanying the application, they recommend that the preferred access route to the site for abnormal loads is taken along A811 to Carrochan Roundabout, then along A813 through Jamestown and finally onto Auchencarroch Road. Any costs associated with temporary works or reinstatement will be required to be met by the developer through a Roads Bond. Due to the potential disruption associated with abnormal loads, their delivery should be scheduled to coincide with the quietest times and avoid public holidays. Parking restrictions may also be required to permit the delivery of abnormal loads and the promotion of a Temporary Traffic Regulation Order for pinch points next to residential areas such as Auchencarroch Road. Deliveries to the site should be managed to avoid any conflicts and within the site, passing places should be provided and measures implemented to avoid any materials being deposited onto a public road.

- 4.11** West Dunbartonshire Council Access Officer has no objection to the proposal. Currently there is little public access to the site due to its remoteness and lack of footpaths. The provision of access tracks within the site would potentially make public access easier and as a result may attract walkers, cyclists and horse riders to the site. However, as it is not practical for the public to access the site via the landfill site track, the site would not be readily accessible unless connecting footpaths were created on neighbouring third party land.
- 4.12** Transport Scotland has no objection to the proposal subject to conditions relating to the movement of abnormal loads on the trunk road network.
- 4.13** The Civil Aviation Authority has no comment on the proposal, but advises that appropriate consultations should be undertaken with NERL, BAA and the Ministry of Defence. In addition, they have provided general guidance indicating that any structures of 91.4m (300ft) or more must be recorded on aeronautical charts and that in certain circumstances structures may also require to be lit. In certain geographical areas the cumulative effects of turbines can lead to unacceptable impacts, for example on radar which is used to monitor the position of aeroplanes in the sky.
- 4.14** NATS En Route (NERL, the UK air traffic control service) objects based on the information submitted as the proposal conflicts with aviation safeguarding criteria. Due to the limited terrain screening available to attenuate the signal, the proposed development is likely to cause false primary plots to be generated at the Cumbernauld Radar Site.
- 4.15** BAA Aerodrome Safeguarding (Glasgow Airport) has no objection to the proposal subject to a condition requiring the agreement and provision of a scheme of red obstacle lighting for the wind farm.
- 4.16** The Ministry of Defence has no objection to the proposal, but requires that the MoD be notified of the progress of construction of the turbines and of any alterations to what is proposed.
- 4.17** BT Operate has no objection and indicates that the proposal should not cause interference to BT's current or presently planned microwave radio links.
- 4.18** Ineos (Grangemouth refinery) operates an oil and gas pipeline which passes under the access track to Auchencarroch Landfill site. Ineos has no objection to the proposal but indicates that the developer should consult them before installing any services across the pipeline route.
- 4.19** Loch Lomond and The Trossachs National Park Authority objects to the proposal for the following reasons:
- It will have a significant adverse landscape impact on the landscape setting and character of South Loch Lomond;
 - It will have a significant adverse impact on the recreational/visitor enjoyment and landscape experience of the southern areas of the National

Park, and particularly the significant numbers of visitors using Loch Lomond and elevated routes, including the prestigious West Highland Way, which support the local tourist economy; and

- It will introduce a negative change on the baseline landscape character of the National Park by introducing large wind turbines in close proximity to key views from the Loch Lomond area, within the National Park, and looking into the National Park from its landscape setting.

4.20 Stirling Council has not objected to the proposal, but has requested that in determining the planning merits of the proposal, the Council take into account the following issues:

- The findings of the EIA that the proposed wind farm will have a major impact, both visually and recreationally, on the Whangie viewpoint, which is also identified in the Stirling Council capacity study as being located in an area valued for a sense of remoteness while being easily accessed from an urban centre; and
- The findings of the Stirling Council capacity study that the lowland hill fringes of Stockie Muir and Cameron Muir, contiguous and to the east of the Rugged Moorland Hills of the Kilpatrick Hills where the development is situated, have limited capacity for wind turbines of between 21m and 50m in height to blade tip.

4.21 Argyll & Bute Council has no objection to the proposal. Within Argyll and Bute the Dunoon area is likely to be most affected by the proposal. Given the distance involved (approximately 25km), the proposal would have less of an impact on communities within Argyll and Bute than those closer to it.

4.22 Inverclyde Council have no objection to the proposal. Although the turbines will be visible from Inverclyde, this will be at distances of between 11km and 17.5km and the impact is considered to be negligible.

4.23 Renfrewshire Council has no objection to the proposal.

4.24 Balloch & Haldane Community Council supports the proposal. A public meeting was held in Balloch, and whilst some members of the community raised concerns about issues including noise, landscape impact, shadow flicker and construction works, the majority of attendees either supported the proposal or were unconcerned about it.

4.25 Kilmarnock Community Council has submitted a record of a public meeting which it held to discuss the application. Whilst the local residents who attended the meeting voted to oppose the proposal by 44 votes to 9, the Community Council itself was tied on the issue. The most significant concerns expressed by local residents were that the wind farm would be highly visible from their area and would have a dramatic impact upon the local landscape, which would be especially significant due to the close proximity to the National Park.

- 4.26** Croftamie Community Council objects to the proposal. The Community Council sent a questionnaire to all local households, and those who responded and stated an opinion opposed the wind farm by 47 votes to 24. The most significant areas of concern to residents were the visual impact on beauty spots within the National Park, disruption to wildlife and doubts about the energy efficiency of wind farms. Some residents also raised concerns about noise.
- 4.27** Killearn Community Council object to the proposal on the grounds that it would have an adverse impact upon the landscape within a Regional Scenic Area which forms an unspoiled gateway to the highlands. Concerns are also raised about disturbance to natural heritage during construction, loss of recreational amenity, impact on tourism within the National Park, and doubts about the efficiency of wind farms in general.
- 4.28** Balfron Community Council object to the proposal due to concerns that it would destroy the heritage of the Loch Lomond area and would be contrary to policy D6 on renewable energy of the West Dunbartonshire Local Plan.
- 4.29** Dumbarton East & Central Community Council object to the proposal due to concerns that it would have a detrimental visual impact, particularly in relation to Loch Lomond and the Trossachs National Park, that it would be contrary to West Dunbartonshire Local Plan policies (GN1, WC1, RSA1, SUS1, E3A, E9, DC6) it would disturb the ground, may not be a reliable source of energy and would impact on wildlife. They further state that it would not comply with the Glasgow and Clyde Valley Joint Structure Plan (2006).
- 4.30** Silverton and Overton Community Council have no objection to the proposal, but request that consideration is given to archaeological interests and that the developer be required to undertake an archaeological survey prior to commencing work.

5. REPRESENTATIONS

- 5.1** In total, 116 representations have been submitted in relation to this application. These comprise 16 representations in support of the proposal, 99 objections to the proposal, and 1 representation (from Drymen and District Local History Society) which does not express an opinion but which requests that the impact of the development upon an old drove road on the site be given due consideration in the determination of the application.
- 5.2** Those making representations in support of the proposal include the National Farmers' Union. Their grounds of support are summarised as follows:
- The future of the country depends on increased use of renewable energy, and renewable energy schemes should be encouraged;
 - The proposal will contribute to the provision of low carbon electricity;
 - The proposal will bring economic benefit to the area and create employment opportunities;

- The proposal will improve access to the site;
- The proposal will support farming and subsidise income through diversification;
- The proposal will attract investment to West Dunbartonshire; and
- The scale of the proposal is limited and the area covered by the application is relatively small;
- The proposal has been designed to minimise its impact on the landscape and the visual amenity of the surrounding area;
- Wind turbines are visually attractive, or are more attractive than other countryside infrastructure (e.g. electricity pylons);
- The proposal will have a minimal impact on wildlife;

5.3 The objections include correspondence from one MSP, one MEP, the Mountaineering Council of Scotland, the Scottish Campaign for National Parks, Friends of Loch Lomond and the Trossachs, Clydebelt, and the Endrick Valley Action Group. Their grounds of objection are as follows:

Principle of Wind Farm

- Sufficient on shore wind provision already exists;
- Wind farms are inefficient;

Landscape and Visual Impact

- The site will not be returned to its natural and original condition at the end of the life of the wind farm;
- The wind farm will have a detrimental impact on landscape and an unacceptable visual impact;
- There will be a negative impact on the landscape character and natural heritage of the area which is enjoyed by residents and visitors alike;
- The Kilpatrick Hills act as a natural barrier between the built up areas of Glasgow and Loch Lomond and the Trossachs National Park;
- The wind farm would dominate the southern horizon when the site is viewed from Loch Lomond to the north;
- The wind turbines would cause shadow flicker which would detract from the visual amenity of the area;
- The skyline at this location is entirely natural at present and a wind farm development would significantly alter this and introduce an industrial style development;
- The proposed turbines will create a skyline silhouette;
- The visualisations and photomontages which have been prepared and accompany the application, underestimate the actual visual impacts of the proposed development;
- Use of red obstacle lighting on some of the turbines will light up the night sky and cause light disturbance and detract from the visual amenity of the surrounding area;
- The proposal will have an unacceptable visual impact, especially since the Kilpatrick Hills form part of a special scenic area;
- The development would have a detrimental visual impact on the Kilpatrick Hills and the setting of Loch Lomond and the Trossachs National Park;
- The site should remain free of an industrial style development;

Policy Issues

- The proposal is contrary to both the local plan and the structure plan;
- The site is located outwith the broad area of search defined by the Clyde Valley Strategic Development Plan as suitable for wind turbines;

Economic Impact

- The development will have a detrimental impact on Loch Lomond and the Trossachs National Park and the tourist industry in the surrounding area;
- The proposal would have a detrimental impact on the West Highland Way which is a significant tourist attraction;
- The local economy will receive very little benefit from the proposal;
- Electricity produced by wind turbines is more expensive than from fossil fuels or nuclear power;
- The proposal will lead to minimal job creation whilst tourist related jobs could potentially be lost if tourism to the area was affected;
- The proposal will not result in sufficient economic benefits to the wider area yet will have a significant impact on the surrounding area;
- The development could have a detrimental impact on tourism since visitors could choose not to make a return visit to the area as a result of the location and general impact of the wind farm;
- Any potential community benefits which have been proposed have not been formally agreed;

Amenity Issues

- The development is too close to nearby houses;
- There are potential health implications for anyone living close to the turbines;
- The wind turbines would cause noise disturbance;
- It could disrupt television and radio signals;

Natural Heritage

- The wind farm will have a detrimental impact on wildlife;
- Pollution created during construction may affect the quality of groundwater;
- The wind farm would disturb and affect bird populations in the area;
- The development could represent a danger to wildlife and walkers due to throwing ice blocks during winter;
- There will be disturbance of peat bog during construction;
- The creation of borrow pits will have a detrimental impact on the site and surrounding area;
- The landscape will be scarred during construction;
- The development would in reality result in a permanent alteration of the landscape;

Historic Matters

- The development would have a detrimental impact on Scheduled Ancient Monuments and their setting within the Kilpatrick Hills;

- The development could destroy an historic drove road which is located on site;

Future Impacts

- Granting planning permission would set a precedent and make it likely that further wind farm developments would be proposed nearby;
- The cumulative impact of this development and other existing wind farms around Loch Lomond would be unacceptable;

6. ASSESSMENT AGAINST THE DEVELOPMENT PLAN

Glasgow and the Clyde Valley Strategic Development Plan

- 6.1** The approved Strategic Development Plan (SDP) outlines a strategic spatial framework for wind energy development as part of its Spatial Development Strategy. Broad areas of search for strategically significant wind energy development, defined as having an output capacity of 20 MW or more, are identified. The proposed wind farm is not located within a broad area of search and therefore cannot be considered to accord with the Spatial Development Strategy of the Strategic Development Plan.
- 6.2** Diagram 4 of the SDP provides a framework for assessing development proposals. Where proposals are not in line with the Spatial Development Strategy, a sustainable locations assessment is to be undertaken. Many of the criteria to be used for undertaking the sustainable location assessment are positive with regard to low carbon energy and minimising climate change, and in terms of demand, the Scottish Government has set ambitious targets for renewable energy generation. It is therefore considered that the proposed development can be assessed positively against Diagram 4. Notwithstanding this, Diagram 4 states all applications are also subject to Local Development Plan assessment.
- 6.3** In conclusion, the proposed development is not in accordance with the Spatial Development Strategy of the SDP, and requires assessment against the Local Plan and emerging Local Development Plan.
- ### West Dunbartonshire Local Plan (2010)
- 6.4** The application site is located within the Kilpatrick Hills Regional Scenic Area (RSA). Policy RSA1 states that the Council will conserve the high quality landscape of the Kilpatrick Hills as an important Scenic Area. There is a general presumption against proposals that would have an adverse impact on the landscape quality, character, visual amenity, or nature conservation value of the area.
- 6.5** Policy DC6 relates to renewable energy proposals and states that development will be permitted where it can be established without unacceptable detriment to the landscape, natural and built heritage, sport and recreation interests and local amenity. Development should be considered against the following criteria: visual impact and effect on landscape character, including the landscape character of the Kilpatrick Hills RSA; nature conservation interests; the historic environment and its setting, including

scheduled ancient monuments; local amenity such as noise, traffic or broadcast interference; and any cumulative impact.

- 6.6** Policy DC3 states that within the Glasgow Airport Safeguarding Zone, development which adversely affects the operational integrity or safety of the airport will not normally be permitted.
- 6.7** Policy GN1 seeks to promote, protect and improve the Green Network. It states that development which is detrimental to the green network will be considered contrary to the Plan, and that new development should contribute positively to the protection and improvement of the green network. The Kilpatrick Hills are recognised as an important green network resource in West Dunbartonshire owing to their landscape value, the habitats and species found there and the outdoor recreation opportunities they offer.
- 6.8** Policy SUS1 states that all development should seek to conserve and enhance environmental resources and ensure environmental impact is minimised.
- 6.9** Policy E3A states that the Council will seek to maintain and enhance the environmental resources of the Plan area by protection of habitats, species and natural features which are vulnerable and/or specifically protected, including Local Nature Conservation Sites. It also states that proposals should not have an adverse effect on the integrity or character of Local Nature Conservation Sites and that satisfactory arrangements for habitat creation/site enhancement elsewhere should be made to compensate where development would cause the total or partial loss of a Local Nature Conservation Site. The Merkins site is not identified as a Local Nature Conservation Site in the West Dunbartonshire Local Plan. However, the policy states that in considering proposals for development of other sites which may be of importance for nature conservation but not identified by the Plan, regard will be had to available survey material. A review of Local Nature Conservation Sites in 2008 identified much of the Merkins site as a potential Local Nature Conservation Site and this is now identified as a Local Nature Conservation Site in the Proposed Local Development Plan.
- 6.10** The matters relevant to the assessment against the above policies are addressed in detail in Section 7. Taking that assessment into account it is concluded that the proposal is contrary to the following policies:
- Policy RSA1 on the grounds that the proposal would have an adverse impact on landscape quality, character and visual amenity;
 - Policy DC6 on the grounds that the proposal would have an adverse impact and effect on the landscape character of the Kilpatrick Hills Regional Scenic Area;
 - Policy DC3 on the grounds that the proposal may adversely affect aviation safety;
 - Policy GN1 on the grounds that the development would be detrimental to the Green Network by having an adverse impact on the landscape character of the Kilpatrick Hills;

- Policy SUS1 on the grounds that the proposal has an adverse impact on the Kilpatrick Hills, which are an important environmental resource.

7. ASSESSMENT AGAINST MATERIAL CONSIDERATIONS

West Dunbartonshire Local Development Plan (WDLDP), Proposed Plan

7.1 The Proposed Local Development Plan (Proposed Plan) identifies the Kilpatrick Hills as a 'Changing Place'. The Proposed Plan's strategy for the Kilpatrick Hills is to:

- protect and enhance landscape character
- protect and enhance habitats and geological features
- improve access to the Hills

The Proposed Plan recognises that the appearance of the Kilpatrick Hills will change over the lifetime of the Plan.

7.2 The site lies within the wider countryside as identified by the Proposed Plan and Policy DS2 restricts development outwith the urban area to certain uses. This includes infrastructure with a specific locational need. It is required that any development within the countryside is suitably located, designed and landscaped.

7.3 All of the site is covered by a proposed Local Nature Conservation Site (LNCS) identified by the Proposed Plan. Policy GN3 states that development which harms LNCS will not be permitted except where adverse effects are offset or compensated in a way that adequately maintains the integrity of the interests affected.

7.4 The site lies wholly within the Kilpatrick Hills Local Landscape Area which is identified by the Proposed Plan. Policy GN4 states that any development that would have an adverse impact on landscape character will not be permitted, and that development that could affect the Kilpatrick Hills will be required to protect and, where possible, enhance their special qualities. The special qualities are identified in a draft Statement of Importance which is considered below.

7.5 Policy DS5 of the Proposed Plan states that renewable energy development will be supported where it:

- a) avoids significant adverse impact on the green network, particularly:
 - the habitat network and geo-diversity
 - landscape character
 - forestry and woodland
 - the water environment
 - the path network
- b) avoids significant adverse impact on built heritage, particularly:
 - the Antonine Wall
 - scheduled monuments and other archaeology
 - listed buildings
 - conservation areas

- gardens and designed landscapes
- c) avoids adverse impact on aviation and defence interests;
- d) avoids adverse impact on telecommunications and broadcasting interests
- e) avoids adverse impact on communities and residential amenity;
- f) for wind energy:
 - is outwith the areas of significant protection identified in the relevant spatial frameworks;
 - avoids adverse impact on the specified interests in the areas of potential constraint identified in the relevant spatial framework;
 - avoids significant adverse impact on the setting of and views to and from the Loch Lomond and the Trossachs National Park and Loch Lomond National Scenic Area;
- g) accords with Supplementary Guidance.

7.6 Supplementary Guidance on renewable energy developments for the Kilpatrick Hills has not yet been produced and cannot be considered. With regard to the spatial frameworks set out in the Proposed Plan, the proposal site is not within an area of significant protection so it is not excluded by the policy. It is within an area of potential constraint owing to it being within a Local Landscape Area, Local Nature Conservation Site and the Glasgow Airport consultation zone. These matters and other relevant matters referred to in the assessment criteria of Policy DS5 are assessed below.

7.7 Taking the assessment below into account it is concluded that the proposal is contrary to the following policies:

- Policy DS2 on the grounds that the proposal is not suitably located to minimise impact on its setting
- Policy GN4 on the grounds that the proposals would have a significant adverse impact on landscape character and would adversely impact on the special qualities of the Kilpatrick Hills
- Policy DS5 on the grounds that the proposal will have a significant adverse impact on landscape character and on the setting of, and views to and from the National Park and Loch Lomond National Scenic Area and an adverse impact on aviation interests.

Scottish Planning Policy (SPP)

7.8 The SPP emphasises the importance of sustainable development and the need to tackle climate change, and indicates that the Scottish Government's commitment to increase the amount of electricity generated from renewable sources is a vital part of the response to climate change. It is stated that renewable energy generation will contribute to more secure and diverse energy supplies, and will support sustainable economic growth. Onshore wind is recognised as a main source of renewable energy supply.

7.9 SPP advises that planning authorities should support wind farms in locations where the technology can operate efficiently and environmental and cumulative impacts can be satisfactorily addressed. It states that the criteria for determining wind farm are likely to include:

- landscape and visual impacts;

- effects on natural heritage and the historic environment;
 - contribution towards renewable energy generation targets;
 - effect on local and national economy and tourism/recreation interests;
 - benefits and disbenefits for communities;
 - aviation and telecommunications;
 - noise and shadow flicker; and
 - cumulative impact
- 7.10** The design and location of a wind farm should reflect the scale and character of the landscape and the location of turbines should be considered carefully to ensure that the landscape and visual impact is minimised.
- 7.11** If granting planning permission for renewable energy development, planning authorities should include provision for decommissioning of infrastructure and site restoration. Where developers voluntarily offer community benefits such as community trust funds, these should not be treated as material planning considerations unless they are required for a legitimate planning purpose.
- 7.12** The SPP also offers general policy on landscape and natural heritage issues. It recognises that landscapes and natural heritage are sensitive to inappropriate development and planning authorities should ensure that potential effects are considered when deciding planning applications. It recognises that there may be occasions where the sensitivity of the site or the nature or scale of the proposed development is such that the development should not be permitted. The precautionary principle should be applied where the impacts on nationally or internationally significant landscape or natural heritage resources are uncertain but there is sound evidence for believing that significant irreversible damage would occur.
- 7.13** The SPP states that development that affects a National Scenic Area should only be permitted where it will not adversely affect the integrity of the area or the qualities for which it has been designated, or any such adverse effects are clearly outweighed by social, environmental or economic benefits.
- 7.14** The proposal is assessed against the issues raised in SPP below. Overall, it is considered that the turbines proposed are not appropriate for the receiving environment and therefore would have a detrimental impact on nationally important landscape and visual amenity interests, both of which are cited in SPP as valid material considerations in the assessment of the acceptability of wind farms.

Proposed Kilpatrick Hills Local Landscape Area – Draft Statement of Importance

- 7.15** A draft statement of importance has been prepared to justify the identification of the proposed Kilpatrick Hills Local Landscape Area. This identifies the special qualities of the Kilpatrick Hills as being:
- Strong sense of remoteness, wildness and open horizons
 - Distinctive geomorphology and topographical features
 - A unique diversity of views

The impact of the proposed development on these special landscape qualities of the Kilpatrick Hills is assessed below.

Site Selection and Design

- 7.16** In terms of the operational requirements for wind farm sites, the application site occupies an exposed location which is anticipated to have good wind speeds, and the applicant has been measuring this by way of a temporary anemometer mast. Further operational advantages for the applicant include its proximity to a grid connection point (minimising the need for new cables or overhead lines), a sufficient site area to accommodate viable generating capacity, and the availability of an existing HGV access route close to the site (minimising the need to construct new access tracks and the associated environmental impact). In terms of impacts on the environment and the surrounding area, the nearest settlement to the site (Bonhill) is located 2.5km away and there are no residential properties within 2km of the proposed turbines, so reducing the likelihood of disturbance to residents. Auchencarroch Landfill Site is immediately adjacent to the site to the north-west, so there is already significant activity nearby.
- 7.17** The design of the turbines and ancillary structures follows current wind energy industry practice, and the turbines would be of the 'normal' style widely used at other wind farms. The applicant has indicated that in light of the views available around the site, the turbines have been set in locations chosen to minimise their impact. A number of potential layouts were considered by the applicant prior to the submission of the planning application. Initially, consideration was given to erecting twenty smaller turbines on the site. However, this was reduced to the current proposal of 10 large turbines in order to minimise disturbance to archaeological and hydrological features as well as reducing the impact on ecological features, particularly sensitive habitats. The applicant also concluded that the visual impact of a smaller number of larger turbines would be preferable. The three highest turbines would be located on lower ground in order to level out the heights when viewed from a distance. The general layout has been designed to be as compact as possible, in the knowledge that views from sensitive locations such as LLTNP and the Kilpatrick Hills are unavoidable. It is acknowledged that an effort has been made by the applicant to minimise the impact of the development in terms of the layout, height and number of turbines to reduce the impact on the surrounding landscape.

Landscape and Visual Impacts - Methodology

- 7.18** The applicant has submitted a landscape and visual impact assessment for the proposed turbines, access tracks, substation building and construction compound (although the latter two features are considered to be of relatively minor significance). The methodology for the landscape and visual assessment was informed by policy and good practice advice from the Scottish Government, SNH, and normal energy industry practice. Information was gathered from sources including the development plan, Scottish Natural Heritage Landscape Character Assessments, Ordnance Survey information, field surveys and aerial photography, computer generated models and consultation with the relevant local planning authorities and statutory bodies.

- 7.19** The Environmental Impact Assessment (EIA) Regulations require that the significance of each potential impact in terms of landscape and visual impact is identified. The impacts identified have then been assessed in the Environmental Statement (ES) and four levels of impact are used: major, moderate, minor and negligible. Moderate and major impacts are considered to be significant for the purposes of the EIA regulations. The assessment of the level of impact is a judgement and takes into consideration the sensitivity of the receptor or resource and the predicted magnitude of change resulting from the proposed wind farm.
- 7.20** The geographical extent to which the wind farm would be visible has been established by a 'Zone of Theoretical Visibility' (ZTV). This was created using computer software to calculate where the wind farm will potentially be visible from in the surrounding area, taking account of topography. The ZTV establishes the locations from which the turbines may potentially be visible, but does not take into account any natural or man-made screening such as buildings or trees. The ZTV demonstrates that the wind farm, or parts thereof, would be visible from Dunoon, Inverclyde, most of Dumbarton and the Vale of Leven, Gartocharn, Drymen and Balfron, as well as much of Loch Lomond and from high ground from Renfrewshire Heights in the south to parts of the Trossachs in the north. From some of these locations only the tips of the turbine blades would be visible, and visibility would obviously depend on weather conditions, especially for the more distant locations. The ZTV demonstrates that the proposed wind farm would not be visible from Clydebank, Glasgow, Helensburgh, Loch Long or from the south-eastern corner of Loch Lomond, from which it would be screened by intervening high ground.
- 7.21** Having established the extent of the area from which the wind farm may be visible, it is necessary to assess the impact which this visibility would have. The potential impacts of the development have been assessed in terms of:
- landscape character and resources (i.e. an assessment of the impacts upon the various different types of landscape within the ZTV);
 - impact on designated landscapes;
 - views and visual amenity (i.e. the appearance of the wind farm from settlements, routes and other important viewpoints); and
 - cumulative impacts (i.e. overall impacts along with other existing and proposed wind farms)

Landscape and Visual Impact - Landscape Character

- 7.22** As the ZTV for the proposed wind farm would extend over a wide area, it would have an impact on numerous different landscapes. These different landscapes are categorised in accordance with the Landscape Character Types (LCTs) set out in Scottish Natural Heritage's Landscape Character Assessment documents. Built-up areas are not included in these LCTs. Eighteen different LCTs are identified as being affected to various degrees, and a summary of the assessed impact upon each LCT is provided in Appendix 1. In most cases the ES assesses the impact as minor or

negligible, but for the following two LCTs the ES acknowledges that the impact would be more significant:

- Rugged Moorland Hills LCT. This designation covers the southern part of the Kilpatrick Hills, as well as parts of the Campsie/Kilsyth Hills and Renfrewshire Heights. The impact on the LCT overall is assessed as “minor”, but the specific impact on the Kilpatrick Hills section of the LCT is assessed as “major”. The windfarm would be seen as a new man-made element within the open hills and may affect the sense of scale of the landscape;
- Rolling Farmland with Estates LCT. This covers the area to the south of Loch Lomond between Balloch and Gartocharn, and the impact is assessed by the ES as “moderate”. Parts of this area are screened by topography or trees, but where the wind farm would be visible it would appear as a prominent element in the landscape.

7.23 Concerns have been expressed by some consultees and objectors, in particular SNH who consider that the proposed wind farm would affect highly sensitive LCTs within the National Scenic Area and the National Park (see section on designated landscapes below). They consider that these landscapes have the least capacity for accommodating wind farm development, due to their remoteness and exposure, valued natural and historic character, important distinctive landforms and high density of landscape features. In particular, SNH consider that there would be significant adverse impacts on the character and special qualities not only of Rolling Farmland with Estates LCT (as noted in the ES), but also of Loch Shore Fringes LCT and Loch Lomond Islands LCT. They have emphasised that the adverse impacts would be extensive in terms of the diversity of LCTs involved. Of the ten LCTs within the National Park which are within 15km of the wind farm site, SNH consider that eight would be adversely affected, most of which are of a high sensitivity to the proposal. It is SNH policy only to submit formal objections to wind farm applications where there is a natural heritage impact of national importance. The fact that SNH have objected to this application indicates the national importance which they attach to the landscapes affected by this proposal.

7.24 Loch Lomond and the Trossachs National Park Authority has also indicated that it does not agree with the conclusions of the ES in relation to landscape character, and considers that the proposal will give rise to significant adverse impacts upon various LCTs within the National Park. Impacts on the National Park are considered in paragraphs 7.29 – 7.33 below. Objections on landscape grounds are also raised by many individual objectors, and from the Community Councils representing Killearn, Croftamie and Dumbarton East and Central.

7.25 Whilst not objecting to the application, Stirling Council has noted that the nearest areas of land within their boundary are the Lowland Hill Fringes of Cameron Muir and Stockiemuir, which are about 3km to the north-east of the site. The ES concluded that this LCT has a medium sensitivity and that the impact of the proposed wind farm would be minor. However, Stirling Council

advise that in March 2011, they formally adopted their Interim Locational Policy and Guidance for Renewable Energy Developments, based on the Stirling Landscape Sensitivity and Capacity Study for Wind Energy Development (2007). That document identified Cameron Muir and Stockiemuir as having capacity only for wind turbines of between 21m and 50m high to blade tip, and also found that 'distinctive hill edges' in this area were a further constraint, including the southern slopes of Stockiemuir as they rise and steepen towards the Whangie and Auchineden Hill. Overall, Stirling Council's guidance concluded that only limited portions of the relevant Lowland Hill Fringe LCT were deemed to have capacity for wind turbines, and then only up to a maximum of 50m in height to blade tip. The study identified Auchineden Hill, The Whangie, and Stockiemuir as an area valued for a sense of remoteness while being easily accessed from an urban centre, resulting in further capacity sensitivities for wind turbine developments. Whilst the Stirling Council study does not cover the application site, it does relate to nearby land and it does not identify any capacity for the type of large turbine currently proposed.

- 7.26** In terms of policy and guidance, it is necessary to have regard to the advice given in Scottish Planning Policy, the accompanying Advice Note on Wind Turbines, and to the sustainability, landscape and renewable energy policies contained in the Development Plan. In accordance with national policy, the Development Plan seeks to preclude proposals which do not satisfy the principles of sustainable development, including those which impinge inappropriately on landscapes valued for their intrinsic attributes and their scenic qualities. The Council has sought to consider the landscape impact of the development and assess whether the scale of development is appropriate at what is regarded as a sensitive location in order to avoid significantly compromising the landscape character. It is noted in the case of 'Open Ridgeland' LCT that there are currently no consented wind farms in this LCT, which is considered to be sensitive to wind farm development. Whilst it is accepted that there may be a limited occurrence of this particular LCT, its sensitivity is heightened by its relationship with the nearby LLTNP, with adjacent and more sensitive LCTs. Landscape sensitivity of this LCT is judged to be high, especially when the proposal is for large scale turbines. It is considered that there is no scope for the large turbines proposed to be located in this LCT without incurring significant impacts on a number of sensitive locations.
- 7.27** The type of turbine proposed is such that there are no existing features in the landscape which are of a similar size or scale. Their height, rotor diameter and rotation would constitute inappropriately scaled elements in the landscape, to the detriment of the landscape character of the Kilpatrick Hills and its appreciation from adjoining landscape character types. The development comprises large turbines which are more likely to be suited to areas where they may benefit from separation distance between communities and sensitive receptors without exerting an inappropriate influence on the sensitivities of the Kilpatrick Hills. Inappropriately scaled and sited turbines have the potential to diminish the apparent scale of landscapes to the detriment of landscape character, and also to impinge upon the appreciation

of the landscape from viewpoints valued for their scenic qualities. It is therefore considered that the proposal is contrary to policies DC6, GN1, SUS1 and RSA1 of the adopted Local Plan, policies DS2, GN4 and DS5 of the West Dunbartonshire Local Development Plan – Proposed Plan and does not comply with SPP since the development will have a detrimental impact on the landscape quality of the Kilpatrick Hills and surrounding area. SPP states that the precautionary principle should be applied where impacts on nationally or internationally significant landscape or natural heritage resources are uncertain but there is sound evidence for believing that significant irreversible damage would occur. The introduction of the wind farm into a natural landscape will have a major adverse impact on the landscape character of the Kilpatrick Hills and a wider significant adverse impact on other LCTs located around Loch Lomond. The proposal will therefore have an unacceptable impact on the Kilpatrick Hills and the LCTs around Loch Lomond.

Landscape and Visual Impact – Designated Landscapes

7.28 The ZTV covers a study area of 35km and within the study area there are a number of landscape designations. The landscape designations which are affected by the proposal and located within the ZTV study area are as follows:

- Loch Lomond and the Trossachs National Park (LLTNP);
- Loch Lomond National Scenic Area (NSA);
- Inventory of Gardens and Designed Landscapes (Balloch Castle)
- Development Plan designated landscapes (Regional Scenic Areas, Areas of Great Landscape Value);
- Regional/Country Parks

Loch Lomond and the Trossachs National Park (LLTNP)

7.29 The application site is located only 2km from LLTNP, which is one of only two National Parks in Scotland. Although the National Park is not itself a landscape designation, the landscape is one of the main reasons for which the Loch Lomond and Trossachs area is designated as a National Park. National Parks are defined as extensive areas of the very highest value to the nation for their scenery and wildlife, and their cultural value. Some of the special qualities identified in LLTNP include; diverse landscapes and diverse experiences, mountains and moorlands. Whilst the Kilpatrick Hills are outwith the National Park boundary, they contribute to the landscape setting of the National Park, appearing as a natural landscape boundary close to its southern edge.

7.30 The application site will be readily visible from a significant area of LLTNP, including parts of the Loch, some of the Islands, Conic Hill, Ben Lomond, Balmaha, Duncryne Hill, part of the West highland Way route and the area around Duck Bay. The northern part of LLTNP will be relatively distant from the site. At present, there is little in the way of significant man-made structures which are visible from large swathes of LLTNP and it appears as a relatively natural environment. Although the wind farm would be located outwith the boundary of LLTNP, it will be visible and represent a significant change to the landscape of the Kilpatrick Hills. The ES states that there will be some significant impacts on views from areas closest to the wind farm,

including from the southern end of Loch Lomond and around Gartocharn but concludes that as a whole, the impact on the visual amenity of LLTNP will be of minor adverse significance.

- 7.31** SNH has based its response on a landscape-specific report “*The Special Qualities of Loch Lomond and the Trossachs National Park*” (2010) which SNH commissioned and produced in partnership with the LLTNP. SNH considers that the proposal would have direct adverse impacts on the following “special qualities” of the National Park:

Special Quality	SNH Comments on Impact
<i>World renowned landscape famed for its beauty;</i> <i>Wild and rugged highlands contrasting with pastoral lowlands</i>	<i>The rural, pastoral beauty essential to these two qualities would be diminished by the introduction of prominent turbines on the southern skyline.</i>
<i>Famous through routes;</i>	<i>Wind farm would detract from the landscape experience on routes between and beyond Drymen to Balmaha, The West Highland Way and B837. There would be similar, but less pronounced impacts on parts of the A82 corridor, notably at some of the loch-side visitor ‘stops’.</i>
<i>Tranquility;</i>	<i>Around the southern part of Loch Lomond, the wind farm would significantly detract from the perceived naturalness and strong sense of tranquillity that are crucial to this Quality. This would be due to the development being the first large scale development introduced to the immediate skyline setting of LLTNP.</i>
<i>Easily accessible landscape splendour;</i>	<i>Many of the views of the Park’s splendour that are most popular and heavily visited (due to their proximity to Glasgow and easy access), would be among those most adversely affected (eg. B837 Drymen to Balmaha, Craigie Fort, Conic Hill).</i>
<i>Immensity of Loch and landscape;</i>	<i>By introducing large vertical structures into the immediate setting of Loch Lomond, the wind farm would significantly detract from this Quality. In particular, the landscape of the NSA and Park would appear less ‘immense’ in views which currently ‘borrow’ from the undeveloped landscape of the Kilpatrick Hills. The turbines would greatly diminish the perceived scale of the Kilpatrick Hills.</i>
<i>Multitude of beautiful islands;</i>	<i>The development would directly impact on many visitors’ experiences of the islands. It would adversely affect many views not only of the islands, but also from them and from boats used to access them. As conspicuous intrusions into the</i>

	<i>semi natural landform setting, the turbines would diminish this Quality even where they would be seen in different directions than from the islands (eg. in views from Duncryne).</i>
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- 7.32** Furthermore, LLTNP state that this proposal would introduce the first commercial scale wind farm visible from within the southern part of Loch Lomond. Due to its high visibility, they consider that it will alter the landscape of the southern part of the National Park and change the landscape setting at a location visible from many visitor arrival routes. They further consider that the introduction of the wind farm structures will contribute to a sense of the urban area encroaching onto south Loch Lomond, particularly when viewed from summits such as Ben Lomond, which presently does not occur. They consider the potential impact of the development to be greater than outlined by the applicant, given the visibility from the Loch, paths and summits which attract significant numbers of visitors and residents due to the intrinsic landscape quality of this area of the National Park.
- 7.33** Whilst it is accepted that the proposed wind farm will not be visible from large parts of LLTNP due to its location and the distances involved, it will be extremely visible from some of the most important, iconic and popular areas within LLTNP such as from the Loch itself, the islands within Loch Lomond, the area around Duck Bay, Conic Hill and parts of the West Highland Way. Although the ES concludes that the magnitude of change and impact of the wind farm on LLTNP will be of minor significance, it is considered that the actual impact will be far greater and this view is strongly supported by SNH and LLTNP. Therefore, it is considered that the proposal will have a detrimental and unacceptable impact due to the significant adverse impacts on the landscape setting of LLTNP.

National Scenic Areas (NSA)

- 7.34** NSAs are defined as areas of outstanding scenic value in a national context. Loch Lomond NSA is located within LLTNP and will have views of the wind farm from open hills and summits, as well as some lower lying areas and loch waterfront views. The site of the proposed wind farm is located outwith the NSA and the ES considers that it will be perceived as such, due to its location within the Kilpatrick Hills which form the back drop to the NSA to the south. The ES concludes that the magnitude of change on the NSA will be medium for areas with views of the wind farm within 10km of the site and that the overall impact on the NSA will be of minor significance. Due to the overlap between LLTNP and Loch Lomond NSA, the views of SNH and LLTNP expressed in paragraphs 7.29 – 7.33 also apply to the NSA.
- 7.35** Whilst it is accepted that the proposed wind farm would not be visible from large parts of the NSA, and from other areas it will be more than 10km away, it would be highly visible from some of the most important, iconic and popular areas within the NSA. It is considered that due to the extent of the area that the wind farm will be visible from and the importance of these locations such as on the Loch itself, Balmaha Harbour and Duck Bay within the NSA, the

proposal will have a detrimental and unacceptable impact due to the significant adverse impacts on the landscape setting of Loch Lomond NSA.

Historic Gardens & Designed Landscapes

- 7.36** Gardens and designed landscapes can be defined as grounds that are consciously laid out for artistic effect. This broad definition includes many different kinds of site, ranging from the policies of a historic country house, to botanic gardens collections, urban parks, small plantsman's gardens and even some cemeteries. Balloch Castle and Country Park covers a limited area along the shore of Loch Lomond, north of Balloch and gives people convenient opportunities to enjoy the countryside and provide open air recreation. Due to the distance from Balloch Castle to the application site and the tree coverage in the area, the ES concludes that the proposal will have a negligible impact on Balloch Castle and Country Park or its setting. Overall, the wind farm may appear in the backdrop to views of the castle from certain viewpoints, however it is considered that the wind farm will have no significant effects upon Balloch Castle and Country Park.

Development Plan Designated Landscapes

- 7.37** Regional Scenic Areas (RSAs) and Areas of Great Landscape Value (AGLVs) are landscapes which have been designated as having local or regional importance by the relevant local planning authority. Whilst precise definitions differ between planning authorities, such designations seek to preserve a high quality landscape and its natural character. The RSA which is primarily affected by this proposal is the Kilpatrick Hills RSA, which covers the area of the Kilpatrick Hills located within West Dunbartonshire. The wind farm will be located within the Kilpatrick Hills RSA and will result in direct changes to the landscape. The site is readily visible from a wide area and the ES states that there will be a high magnitude of direct change within the RSA due to the presence of the wind farm and also due to the visibility of the wind farm from throughout the RSA. The ES concludes that there will be a major impact of significance on the RSA and for many it will reduce the scenic qualities of the area.
- 7.38** The wind turbines are large structures which will be a dominant feature within the RSA, particularly from areas close to the turbine locations. It is therefore likely that the RSA designation, based on the scenic attributes of the area, will be compromised. The Kilpatrick Hills form a distinctive rugged landscape, inextricably linked with their surroundings. They are relatively accessible, providing panoramas and a number of high quality vistas, both from the RSA and to other locations such as LLTNP and the Loch Lomond NSA. They are a key backdrop which helps to define the identity of nearby settlements and provide a setting for the nearby nationally important landscapes. The wind farm would detract from the sense of remoteness and wildness provided by the Kilpatrick Hills. It is considered that locating a wind farm within the Kilpatrick Hills would have a significant adverse impact on their setting and detract from their uniqueness and the proposal is therefore unacceptable.
- 7.39** The proposed wind farm would also be visible from two AGLVs further from the applications site, the Trossachs to Breadalbane AGLV and the

Fintry/Gargunnoch/Touch Hills AGLV (both within Stirlingshire). Both of these locations are over 8km from the application site and although the wind farm will be visible from higher ground, it is not considered that there would be any significant adverse impacts on either of these AGLVs.

Regional/Country Parks

- 7.40** The Clyde Muirshiel Regional Park and Gleniffer Braes Country Park are 13km and 18km from the application site respectively. Due to the distance between these parks and the application site, it is not considered that there would be any significant or detrimental impact on their setting or character.

Landscape and Visual Impact – Views and Visual Amenity

- 7.41** The Zone of Theoretical Visibility (ZTV) mapping included in the ES demonstrates that the wind farm would not be visible from the closest built up area (Bonhill) because of the intervening high ground, but that it would be visible from much of Dumbarton, Alexandria, Balloch and Gartocharn at distances of 4 to 7km. From greater distance it would be visible from settlements including Balfron, Bridge of Weir and Greenock (all around 14 to 15km away) and Dunoon (25km), although the visual impact would obviously be less significant at greater distances. Outwith settlements, the wind farm would be visible from much of Loch Lomond, parts of western Stirlingshire and from high ground throughout much of the region. Prior to the submission of the planning application, a scoping exercise was undertaken by the applicant and the relevant planning authorities and statutory consultees were invited to identify particular viewpoints which should be taken into consideration and assessed as part of the EIA. As a result of this exercise, 20 viewpoints were chosen for detailed photomontages in order to permit an assessment of the visual impact of the development.
- 7.42** The applicant has provided photomontages and wireframe drawings for each of the 20 agreed viewpoints. These have been produced in accordance with the nationally agreed methodology for such visual modeling exercises. The photomontages are intended to provide a representation of how the wind farm might typically appear in clear weather, although obviously the appearance would vary according to the weather conditions. The viewpoints chosen, and a summary of the conclusions of the submitted ES for each, are as follows:

Viewpoints	Distance	Summary of ES Comments
<i>Doughnot Hill; The Whangie;</i>	<i>2km 5.4km</i>	<i>Viewpoints located within the Kilpatrick Hills, forming part of an area of elevated and undulating topography. All ten turbines would be visible and would interrupt views towards Loch Lomond and the Arrochar Alps. Proposal would introduce a large scale man-made element into a landscape where currently the main influences are forestry plantations and reservoirs. Magnitude of change at these locations is judged to be high and the adverse impact of major significance.</i>

Blairquhanan;	3km	<i>Introduction of vertical elements against a relatively uniform and horizontal skyline, introduction of man-made structures and/or the relative visibility of the turbines and blades, would result in a medium magnitude of change at these locations, and adverse impacts of moderate significance.</i>
A811 & Old Luss	4.7km	
Road R'dabout;	5.5km	
Duncryne Hill ('The Dumpling');	5.8km	
Dumbarton Rock;	8.9km	
Drymen;	9.5km	
Ben Bowie;	10.7km	
Dumgoyne Hill;		
A82 near	4.1km	<i>Turbines would not be as readily visible or would be significantly further away. From some of these viewpoints, other notable man-made structures are already visible. At these viewpoints magnitude of change is assessed as low and the adverse impact as being of minor significance.</i>
Lomondgate;	10.6km	
Balmaha Harbour;	10.9km	
Kilmacolm Road;	12.8km	
Bat a Charchel;	14.5km	
Balfron;	17.5km	
Lyle Hill, Greenock;		
Luss;	14.8km	<i>Due to existing screening and/or the distance from the site, the magnitude of change is assessed as very low and the significance of adverse impact as negligible.</i>
Misty Law;	22.1km	
Ben Lomond;	23.5km	
Dunoon;	24.8km	
Ben Ledi;	31.9km	

- 7.43** It should be emphasised that these viewpoints are not intended to provide an exhaustive list of significant views of the proposed wind farm. As the wind farm would be visible from a multitude of locations it would not be practical to produce photomontages for every location of note, and the viewpoints chosen are therefore intended to include the most important locations as well as some representative points within settlements and transport corridors. For example, whilst not subject to a photomontage, the red obstacle light on the existing 60m high anemometer mast on the site is readily visible from a variety of viewpoints along the A82 after dark, demonstrating that the wind farm would itself be visible from stretches of one of the main transport routes to LLTNP and the Highlands. Other notable locations from which the wind farm would be likely to be visible include Conic Hill and the area around Duck Bay Marina, which are popular tourist destinations receiving large number of visitors.
- 7.44** The ES itself accepts that turbine development cannot take place on this site without visual impacts arising over a large area and with some relatively close-quarter impacts, particularly on views currently available towards Loch Lomond. It accepts that the scale of turbines proposed would exert 'major' adverse impacts on locations within the Kilpatrick Hills. The ES identifies two particular viewpoints which would have major adverse impacts, both being hilltops within the Kilpatrick Hills which are popular with recreational walkers. It is likely that similar impacts would be experienced from elsewhere within the Kilpatrick Hills.
- 7.45** For other viewpoints, including a range of locations within LLTNP, the ES assesses the visual impact as 'moderate' or lower, but objectors including SNH and the LLTNP have raised concerns that the adverse visual impact upon the southern part of the Loch Lomond National Scenic Area (NSA) and

LLTNP would be more significant. The wind farm site is seen as part of a ridge that forms a defining horizon for many of the area's panoramic and iconic views, and is perceived as forming a semi-natural southern boundary to the National Park. The landform provides a backdrop setting for those views, and it is not currently affected by large built structures. It is argued that the wind farm would adversely affect this important landscape characteristic due to the location of the turbines on the defining ridge, their prominence and their dominant vertical scale relative to the low hills upon which they would stand.

- 7.46** In particular, SNH consider that the applicant's assessment of the visual impact from Loch Lomond (notably the Balmaha Harbour viewpoint) underestimates the likely adverse effect of the development. They point out that the vertical and moving elements of the turbines would be an especially striking change against the horizontal emphasis provided by the loch shores and the undeveloped skyline which would lead to significant adverse impacts. They also consider that there would be significant adverse impacts on views from Craigie Fort above the harbour and Conic Hill, which are both well known and well used viewpoints. Similarly, they consider that there would also be an adverse impact on the tree-framed 'Endrick View' on the path to the summit of Inchcailloch, which is a view promoted to LLTNP visitors, and that the wind farm would have a dominant visual presence from the landmark feature of Duncryne Hill. Therefore, they consider that views from the water within the NSA and West Highland Way would be diminished and there would be significant adverse impacts on the NSA and LLTNP. The views of SNH are also supported by LLTNP.
- 7.47** The applicant has sought to minimise the visual impact of the proposal by reducing the number of turbines from the 14 which were initially envisaged, and by positioning them to achieve a regular spacing to secure a layout which is as aesthetically pleasing as the circumstances allow. The applicant considers that whilst the wind farm will be visible from within the Kilpatrick Hills and from Loch Lomond, it will not have an unacceptable impact on the landscape or visual amenity. However, whilst the applicant's approach has assisted in giving the proposed development a 'neater' appearance, it cannot redress the fundamental issues which arise from the introduction of large wind turbines to this particular landscape. Whilst wind farms make an important contribution to Scotland's economy and environmental commitments, they inevitably have impacts upon the receiving landscape, and it is considered important to preserve the most valuable landscapes from prominent wind farm development. The Loch Lomond area is a significant tourist destination and forms a major part of one of only two National Parks in Scotland, so it is considered highly desirable to preserve its relatively natural landscape setting. It is also considered that the proposed turbines would appear over-dominant from views within the Kilpatrick Hills. Overall, it is considered that the proposal would have a significant adverse visual impact on locations within the National Park, the Loch Lomond NSA, and the Kilpatrick Hills RSA. It is therefore considered that the proposal does not comply with Scottish Planning Policy and is also contrary to policies DC6, GN1, SUS1 and RSA1 of the adopted Local Plan and policies DS5 and GN4 of the West Dunbartonshire Local Development Plan – Proposed Plan. The location of the wind farm is

such that it will be visible from residential areas of West Dunbartonshire, including Balloch, Alexandria and Dumbarton. However, the impact on these settlements is not considered to be unacceptable. The main concern is the visual impact of the development on the natural environment and views from areas such as the Kilpatrick Hills and Loch Lomond.

Landscape and Visual Impact – Cumulative Impacts

- 7.48** The proposal would be the first wind farm development to be located in the Kilpatrick Hills, so there would be no localised cumulative impacts. The nearest proposed wind farm site is over 10km away (Loaninghead, near Balfroon), whilst others are over 23km away. The site is physically and visually well separated from other large scale wind turbine developments. Overall, no cumulative change of significance is identified in respect of the Kilpatrick Hills, although the proposal could set a precedent and could have future cumulative consequences for the Kilpatrick Hills and/or LLTNP through wind turbine developments.

Natural Heritage – Designated Sites

- 7.49** Whilst there are no site-specific statutory nature conservation designations within the site, Dumbarton Muir SSSI is adjacent to the site. There are also nine other SSSIs within a 5km radius, and watercourses within the site flow into three internationally designated conservation sites (River Endrick SAC, Loch Lomond Ramsar site, and the Inner Clyde International Wetland/Ramsar site). Issues specifically relating to Special Protection Areas (SPAs) are considered in Sections 7.62 - 7.70 relating to Ornithology below.
- 7.50** The predicted impact on each of these sites is set out in the ES. It is concluded that there are no anticipated impacts upon Dumbarton Muir SSSI because the closest part of the proposed development (part of an access track) would be 380m away from the boundary, and even in worst case scenarios indirect drainage impacts on blanket bog habitats rarely exceed 100m. The proposed development would be 150m away from the closest part of the Finland Burn (a contributory of the River Endrick). SNH advise that subject to suitable pollution control measures being put in place during construction to protect water quality in the River Endrick, they do not consider it likely that the proposal would have any significant effect upon the qualifying interests of any of the European protected sites, or any impact upon the adjacent SSSI.

Natural Heritage - Habitats

- 7.51** Most of the site comprises habitat types which are protected either by the European Habitats Directive or the UK Biodiversity Action Plan (UK BAP). Twenty different habitat types have been identified, and the principle habitat types within the application site boundary are listed in the ES as follows:

<i>Habitat Type</i>	<i>Importance</i>	<i>% of Site</i>	<i>Total Area</i>	<i>Direct Impact</i>	<i>Pre-Mitigation Indirect Impact</i>
<i>Blanket Bog</i>	<i>European</i>	<i>41.3%</i>	<i>101.5 ha</i>	<i>1.42 ha</i>	<i>6.77 ha</i>

<i>Dry Modified Bog</i>	<i>UK (see below)</i>	<i>18.3%</i>	<i>45.1 ha</i>	<i>3.86 ha</i>	<i>7.83 ha</i>
<i>Wet Dwarf Shrub Heath</i>	<i>European</i>	<i>12.2%</i>	<i>29.9 ha</i>	<i>1.34 ha</i>	<i>7.23 ha</i>
<i>Marshy Grassland</i>	<i>UK (see below)</i>	<i>10.7%</i>	<i>26.3 ha</i>	<i>0.82 ha</i>	<i>4.24 ha</i>
<i>Dry Dwarf Shrub Heath</i>	<i>European</i>	<i>5.5%</i>	<i>13.5 ha</i>	<i>0.39 ha</i>	<i>none</i>

The UK BAP affords priority status to certain specific sub-types of dry modified bog and marshy grassland, but not to all such habitats. Most of the dry modified bog and a minority of the marshy grassland on the site are of sub-types covered by the UK BAP.

7.52 Direct impacts upon habitats are those which would arise from the land taken for the development (i.e. the habitats lost to create turbine bases, tracks, borrow pits etc.), whereas possible indirect impacts might include changes to hydrology due to site drainage, pollution of watercourses from spillages or run-off, and fragmentation of habitats as a result of track construction. Discounting the area of the existing access track, the Ecological Impact Assessment indicates that approximately 9.6 hectares of various habitat types would be directly lost as a result of the proposed development. In terms of direct impact on watercourses, the proposal would involve one new watercourse crossing and three upgraded existing crossings, totalling 40m of culvert.

7.53 The applicant proposes mitigation measures to minimise the impact upon habitats. In terms of direct impacts, the construction of turbines, tracks etc. would inevitably result in loss of habitat, but the applicant has sought to position these features so as to avoid the most sensitive habitats within the site wherever practical. In terms of indirect impacts, the risk of these arising can be reduced by mitigation and good practice measures, and the applicant's proposals include the following:

- access tracks designed to maintain or impede drainage through wetland habitats where either of these scenarios would be beneficial to habitat quality and the hydrological regime;
- turbine construction to be micro-sited to minimise peripheral habitat damage;
- provision of silt interceptor traps during construction to minimise unchecked runoff from construction areas;
- culverts and interceptor ditches to be provided in order to feed uncontaminated runoff into existing drainage features;
- habitat reinstatement techniques to be employed where appropriate, including storage and replacement of turfs and peat, and re-seeding of infrastructure edges;
- track construction to take place in stages to allow ongoing restoration (due to need to replace turf without delay)

7.54 Although 20 different types of habitat would be affected, the greatest impacts would be upon three habitat types; blanket bog, dry modified bog, and wet

dwarf shrub heath, and in all three cases the significance of the impact is assessed as “moderate” by the ES. The significance of impacts upon other habitat types are all assessed in the ES as either “minor” or “negligible”. SNH have advised that the overall impact upon habitats would be relatively minor in the context of the Kilpatrick Hills. Overall, it is therefore considered that subject to suitable mitigation measures including a habitat management plan the impact of the proposal upon habitats would be acceptable.

Natural Heritage – Protected Species

- 7.55** A field survey was carried out and a review of records of protected species was undertaken by the applicant’s environmental consultants. There was no evidence of use of the site by water voles, badgers or great crested newts. The extent to which the site is used by protected species was assessed as follows:

Species	Importance	Distribution on Application Site
<i>Otter</i>	<i>European</i>	<i>Evidence of low levels of otter activity, indicating that otters inhabit the site, probably using it for feeding and resting as part of wider territories.</i>
<i>Bats</i>	<i>European</i>	<i>Limited activity by two pipistrelle species, mainly along watercourses and adjacent conifer plantations. Timing of activity suggests that bat roosts are some distance away from the site. Three other bat species have been recorded as occasionally passing through the site.</i>
<i>Badger</i>	<i>UK</i>	<i>No evidence of badgers, although some areas around the access track might be suitable habitat.</i>
<i>Reptiles</i>	<i>UK</i>	<i>Site is likely to support breeding populations of adder and common lizard</i>
<i>Salmon Lamprey Trout</i>	<i>European European UK</i>	<i>Whilst the rivers into which the watercourses on the site flow support salmon and lamprey, the upper reaches of the burns originating on the site are relatively isolated due to waterfalls and low water quality, and are only likely to support small populations of brown trout. Within the application site only the Murroch Burn is likely to contain fish.</i>

- 7.56** The watercourses on the site are not especially suitable as otter habitats, but there is nonetheless evidence that they are used by otters. As the proposed turbines and tracks would all be some distance from identified otter shelters, the development is not likely to cause any direct impact upon otters. The proposal would involve upgrading of three existing watercourse crossings on the Blairvault Burn and one new crossing over the Murroch Burn, but these would be designed to avoid obstructing otter movement corridors. Subject to the proposed measures to minimise the risk of damage to watercourses, the ES concludes that the impact of construction on otters is likely to be of minor significance. Once complete, the actual operation of the wind farm would not have any significant impact on otters. SNH do not dispute this conclusion and advice, based on the updated protected species survey. Consequently, it is unlikely that the proposals will require a licence under protected species legislation.

- 7.57** The proposal would not result in any impact on bat roosts, and the impact of construction on bats is assessed as negligible. However, once operational there is a known risk of bats colliding with turbine blades, with pipistrelle bat species being most commonly affected. These species typically fly at lower heights and forage for insects along watercourses and around woodland, so the risks can be reduced by using taller turbines and placing them away from likely bat corridors. The applicant proposes to site all but one of the turbines so that their rotor sweep at least 50m away from tree lines or watercourses, (in line with Natura England guidelines which are also used by SNH). The exception (turbine 5) would be 48m from a watercourse. Whilst this would not eliminate the risk of collisions by pipistrelle bats or by the other species which have been recorded on passage, the level of bat activity on the site is low and overall the risk to bats is considered to be of negligible significance. SNH are content with the proposed measures to mitigate impact on bats.
- 7.58** Only the area through which the existing access track passes is suitable for badgers, and the 2009 survey found no evidence of badgers being present. A further survey was undertaken in February 2013 which again found no evidence of badgers.
- 7.59** Common lizard and adder are vulnerable to construction activity during late autumn and winter, when they hibernate communally and are at risk of being excavated or crushed by machinery. It is therefore proposed to carry out pre-construction checks of areas likely to be suitable hibernation sites during these months. At other times of the year, adder and lizards are likely to quickly move away from construction activities, and whilst this would give rise to temporary displacement and disturbance the abundance of undisturbed habitat nearby would mean that the overall impact would be likely to be minor, and they would not be affected by the operation of the wind farm once complete.
- 7.60** Within the site, only the Murroch Burn is likely to contain fish. The proposal includes a new crossing of that watercourse, which would be designed to avoid damage to trout spawning habitat. Other than the new and improved crossing points, all works would be at least 50m away from watercourses, and subject to the proposed mitigation and good practice measures to prevent pollution and changes to hydrology it is considered that the impact on fish life within and downstream of the site would be minimal.
- 7.61** Overall, it is considered that subject to the identified mitigation measures and to the implementation of a suitable Habitat Management Plan, the impacts of the proposed development upon protected species would be minimal.

Natural Heritage - Ornithological Impact

- 7.62** The site was the subject of a 12 month bird survey between September 2008 and August 2009 and walkover surveys to quantify the use of the site by breeding and non-breeding birds, as well as desk based surveys of the records of bird life in the vicinity. The potential impacts upon bird life which were considered by the ES were as follows:

- disturbance from habitat loss, construction activities or from the wind farm itself, where this would cause existing species to avoid the site;
- collision with turbine blades;
- cumulative impacts with other existing or proposed development in the area; and
- impact on designated internationally important sites for birds

- 7.63** The significance of impact upon bird life is assessed in terms of the nature conservation value of each bird species / population on the site, and the magnitude of the impact upon the species / population concerned. Six species of significant conservation value were recorded on the site with sufficient frequency to merit detailed consideration in the ES. Three of these were raptor species (hen harrier, merlin and peregrine) which were not recorded as breeding within 2km of the site, and therefore the disruption to foraging caused by construction work would not have a significant impact upon them. Both hen harriers and merlins are known to nest relatively close to wind farms, so completion of the proposed development would be unlikely to prevent these species from nesting in the area in future. There is limited research available on the impact of wind turbines on peregrine foraging behaviour, but as use of the site by peregrines was infrequent the impact upon the species was not considered significant.
- 7.64** Black grouse were not recorded as nesting within 500m of the proposed turbines so disturbance to breeding birds is likely to be minimal. Some temporary disruption to foraging would arise during construction but the habitats adjacent to the windfarm are assessed as having capacity to accommodate the small number of birds displaced during construction. There is little evidence of grouse being affected by operational wind farms, but it is possible that turbine noise might affect mating behaviour by masking the calls of males. However, as the nearest lek (mating display) site was over 800m from the proposed turbines the ES concluded that the impact on black grouse would be minimal.
- 7.65** Curlew would also be temporarily displaced from the site during construction, and this would affect some breeding birds (up to four pairs), but this would not be significant in the context of the local population and it is likely that birds displaced from the site could be accommodated in neighbouring habitat. The applicant also proposes to implement a breeding bird protection plan, with good practice mitigation measures such as timing of construction work to commence prior to the breeding season in order to enable birds to choose alternative nesting sites. There is conflicting evidence about the impact of wind farms on curlews, with some studies having suggested little impact and others a reduction in breeding density. The worst case study suggests that perhaps two pairs of curlew might be displaced from the site, but this is not considered to be statistically significant.
- 7.66** Skylark are abundant within the site, but whilst they too would be displaced during construction activities experience from other wind farm sites suggests that skylark are prepared to hold territory in close proximity to construction activities, so the impact on breeding birds would be proportionately less than

that for larger species. Subject to the aforementioned breeding bird protection plan the impact on breeding skylark is considered negligible. Studies from other wind farms have suggested that skylark are little affected by wind farms, with at worst a small decline in density and in some cases an increase in numbers a few years after completion.

7.67 The bird surveys recorded sightings of target species (those considered vulnerable to blade strike) flying at turbine blade height within the survey area. These surveys also took account of species which fly over the site but which do not use it for breeding or foraging. Over the year only three species were recorded often enough to undertake collision risk modelling. The theoretical collision risks for these species were assessed as follows:

- greylag goose (1 bird every 6 years)
- curlew (1 bird every 11 years)
- peregrine (1 bird every 111 years)

These risks are statistically insignificant in terms of the bird populations concerned. For all other species, the risk of collision with turbine blades was assessed by the ES as negligible. One of these species (black grouse), whilst at negligible risk of collision with turbine blades, is known to be at risk of collision with low solid objects such as fences and turbine bases. That risk is difficult to quantify, but is assessed as low.

7.68 There are no other existing or currently proposed wind farms within 20km of the site, and there are no species present at the application site whose individual birds are likely to have frequent contact with other wind farms. There are numerous existing and proposed wind farms within the West Central Belt Natural Heritage Zone (NHZ), but as the anticipated impacts of the application proposal on bird species are considered to be negligible, it is not likely that the proposal would contribute towards any significant cumulative impact upon any bird species population in the NHZ.

7.69 There are no statutory designated sites with cited ornithological features within 5km of the development, but there are four European Special Protection Areas (SPAs) within 20km of the site:

SPA	distance	species of importance	impact on SPA
<i>Inner Clyde</i>	<i>5.1km</i>	<i>redshank</i>	<i>Only one redshank sited during surveys and there is no evidence of connectivity with the SPA</i>
<i>Loch Lomond</i>	<i>6km</i>	<i>Greenland white-fronted goose, capercaillie</i>	<i>Geese are faithful to specific feeding sites so are unlikely to visit site. Whilst they might occasionally migrate over site the impact would be minimal. No impact on capercaillie.</i>
<i>Black Cart</i>	<i>12km</i>	<i>whooper swan</i>	<i>Swans from Black Cart are unlikely to cross the site for</i>

			<i>feeding and it does not form part of their likely migration route.</i>
<i>Renfrewshire Heights</i>	<i>16km</i>	<i>hen harrier</i>	<i>Site is well beyond the range of hen harriers from the SPA</i>

It is therefore considered that the proposal would have no significant impact upon any of the off-site ornithological designations.

- 7.70** The ES therefore concludes that the proposed development would not have any significant impact upon ornithological interests. The RSPB have indicated no objection to the proposal subject to the proposed good practice measures, including the appointment of an ecological clerk of works, the adoption of a suitable habitat management plan and compensatory habitat restoration works. SNH consider that implementation a suitable habitat management plan may result in the development overall having a net benefit to birds. It is therefore considered that the impact of the development upon ornithological interests would be acceptable.

Hydrological & Hydrogeological Impact

- 7.71** The proposed wind farm layout has been designed to minimise impact on watercourses by limiting the number of new watercourse crossings and maintaining a 50m buffer zone between watercourses and other development. The proposal includes measures such as SUDS to attenuate run off and intercept sediment prior to run off entering watercourses. Due to the underlying geology of the site, there is relatively low infiltration and relatively high run off rates at present and over the whole of the site the new areas of hardstanding would cover a minimal proportion of the ground, so it is not considered that there is any likelihood of causing flooding. Various mitigation measures are proposed to avoid pollution and sedimentation of the water environment. SEPA do not object to the proposal, provided that in the event of planning permission being granted, a condition is attached which requires the submission of a surface water management plan. Overall it is considered that the impact on hydrology and hydrogeology would be acceptable.

Management of Peat/Soil

- 7.72** Works within peat bog areas can cause instability within the surrounding peat and result in peat slides, which seriously degrade peatland habitat. A peat slide risk assessment has been undertaken, which concludes that the site is relatively benign in relation to the potential for a peat slide to occur. Throughout the site there are sensitive receptors to a failure and a number of areas have been identified as having a medium hazard ranking, with one area identified as having a high hazard ranking. The proposed layout avoids as many of the areas of concern as possible, although it does interact with three areas where there is a medium risk. In these areas, mitigation is proposed to minimise peat slide risk which would include drainage measures and site surveys prior to any construction being undertaken. SNH have noted certain methodological issues with the peat slide risk assessment, but consider that the information submitted provides reasonable confidence that the peat slide risk could be acceptably mitigated, and have recommended conditions relating to peat management. It is therefore considered that subject to the

implementation of suitable preventative measures, there should be no significant impacts on peat stability.

Borrow Pits

- 7.73** The application includes a proposal to form a number of borrow pits within the site. Borrow pits are small quarries used to obtain rock for construction of the wind farm, primarily in the formation of the access tracks. Upon completion of the development, the borrow pits would be restored to existing vegetation where possible. If borrow pits are not used, all of the rock used on the site would need to be brought onto the site from elsewhere, which would greatly increase construction traffic. The applicant has indicated that it is difficult to provide precise locations for the borrow pits at this stage, as in practice the location of borrow pits often needs to be amended once a construction contractor is engaged. The applicant has therefore indicated that as a “maximum case” scenario there would be a requirement for four borrow pits, and has provided an indicative plan showing search areas within the site where it is expected that such pits would be located. The precise siting and size of borrow pits could be dealt with by way of a planning condition, but as they are a significant part of the overall wind farm development proposal it is appropriate to consider their likely environmental impacts at this stage. The ecological impacts of the anticipated borrow pits have been included in the discussion of habitats above.
- 7.74** In terms of visual impacts, each borrow pit would cover a relatively small area and their visibility would be reduced by localised screening, topography, the muted colours of the rock, and horizon effects (i.e. when seen close to the horizon they would be hard to make out against the bright skyline). There would not be any impact on long-distance views of the site, and the visual impact of the borrow pits would obviously be relatively minor compared to that of the wind turbines. The borrow pits would be most visible during construction, but over time any remaining exposed rock in the borrow pits would weather and vegetation would become re-established, making the borrow pits less prominent and more difficult to make out from the access track and surrounding land. The restoration of any borrow pits required on site could be dealt with by way of a planning condition.
- 7.75** The anticipated borrow pits would be visible within much of the site itself and from open slopes of Meikle White Hill, Knockupple Hill and the Murroch Burn Valley, within 2km of the site. It is likely that from these locations, the borrow pits would be seen in the context of other infrastructure works associated with the wind farm development such as access tracks. Whilst they would be visible, they would be seen as part of the overall site construction rather than as separate developments. From the aforementioned locations, it is considered that the visual impact of the borrow pits would be of minor significance.
- 7.76** At a distance of approximately 5km on the hills to the west of Alexandria, the borrow pits are likely to be seen as small features in the context of the overall site infrastructure, visible just below the horizon of the site. At this distance, the site infrastructure is likely to be of minimal significance compared to the

visual impact of the actual turbines, which will appear as a much more dominant aspect of the development. There are also trees in the vicinity which may act as a partial screen for some of the borrow pits. In general, the borrow pit assessment concludes that the impact of the borrow pits from these hills is likely to be of minor to negligible significance. From more distant locations, it would be difficult to see the borrow pits or to distinguish them from other site infrastructure. Overall, it is considered that the visual impact of the borrow pits would be acceptable.

Historic Environment Impacts

- 7.77** No historic buildings or monuments are located within the site, although it does contain some areas of archaeological interest which would necessitate the implementation of a programme of archaeological works prior to the commencement of any development. There are a number of scheduled monuments in the vicinity of the site, but there would be no direct impact on these from construction or operation of the wind farm. There would be an impact upon the setting of the long cairn, chambered cairn and cairn at Gallangad Muir, and the long cairn at Gallangad Burn, but Historic Scotland have not objected to the application and it is not considered that the impact on these scheduled monuments would be unacceptable. The wind farm would be visible from locations which also have views of Balloch Castle such as Duck Bay, but it is not considered that there would be a significant detrimental impact on the setting of the listed building or its associated designed landscape.

Renewable Energy Targets

- 7.78** In assessing the acceptability of wind farm proposals, it is necessary to have regard to the macro-environmental aspects of renewable energy (i.e. the national and international benefits of reducing reliance upon fossil fuels and contributing towards reduction in global warming) as well as to the micro-environmental consequences of the proposal (i.e. the impacts on the local environment). Some of the representatives supporting the development have indicated that the future of the country depends on increased use of renewable energy and renewable energy schemes should be encouraged. However, a number of objectors have questioned the efficiency of wind turbines and the extent to which they do contribute towards reducing carbon emissions, but such concerns are beyond what an individual planning authority can reasonably be expected to consider. The Scottish Government has access to high level expert advice on the effectiveness of wind energy, and we are obliged to give consideration to the resultant national energy policies, which support wind energy.
- 7.79** Renewable energy currently provides around 40% of Scotland's national energy supply, but the Scottish Government's target is to generate the equivalent of 100% of energy demand from renewable sources by 2020. To meet this target, onshore wind energy generation would need to continue to grow. There is a need for more wind turbine sites in order to satisfy national energy planning requirements, and across Scotland planning authorities are now having to consider applications for turbines in lower-lying and more populated areas, where design elements and cumulative impacts need to be

managed (Scottish Government's Specific Advice Sheet on Onshore Wind Farms).

- 7.80** The proposal would contribute an output of approximately 20MW in support of the national energy policy. Based on figures from 2008 this output would equate to the annual power needs of over 11,000 households, or 27% of households in West Dunbartonshire.
- 7.81** Whilst the 20MW estimated capacity of the proposal would contribute positively towards the achievement of Scotland's renewable energy commitments, it is not considered that the macro-environmental benefits of the proposal in terms of renewable generating capacity would outweigh the adverse landscape and visual considerations identified above.

Economic and Community Benefit

- 7.82** The application site is currently used for the grazing of cattle and sheep, and whilst this activity would be disrupted by construction of the proposed development the impact on the agricultural industry would be minimal. The National Farmers Union has expressed support for the proposal as it will support farming and subsidise income through diversification. The neighbouring landfill site may experience some occasional disruption during construction due to abnormal load deliveries to and from the site, however this disruption could be accommodated within the general use of the site. The construction of the wind farm would provide employment for up to 30 people, and may create indirect benefits to the local economy through use of local businesses and the development of skills for local people directly or indirectly employed in construction. However, there is no guarantee that local people will be employed due to the specialised skills involved in construction or maintaining the wind farm once operational. The short term impact upon the local economy during construction is likely to be positive. In the longer term, once completed and operational, there would be 3 or 4 full time employment opportunities created, with no negative impact on the use of the land for agriculture or the operation of the landfill site. The proposal will attract investment to West Dunbartonshire which is to be welcomed and there will be an economic benefit to the local area and increased employment opportunities. It is therefore considered that the direct impact of the completed development upon the local economy would be positive, albeit much smaller than that of the construction phase. Indirect impacts, specifically on the tourist industry (eg. visitor numbers to Loch Lomond), are more difficult to quantify, and the impact on tourism is discussed separately below.

Tourism Impact

- 7.83** The degree to which wind turbines influence the tourism industry is difficult to quantify. Some people are not concerned about the appearance of wind farms, with some people actively liking their appearance, and where wind farms open up public access to hitherto inaccessible parts of the countryside, they can themselves generate visits by walkers. On the other hand, some people dislike the appearance of wind farms either in general or within specific locations, and the construction of a wind farm may reduce the enjoyment of

their visit to the area and make them less likely to visit again. Visit Scotland research published in 2011 indicated that less than 20% of survey respondents agreed that they would tend to avoid parts of the country with wind farms.

- 7.84** In deciding an application for a wind farm at Corlarach in Cowal, Argyll & Bute which was “called in” by the Scottish Ministers, they decided to refuse the application on the basis that it would have a negative impact on the landscape within an area where resource based tourism founded partly on landscape and scenery was important and the local economy was heavily dependent upon the tourism sector. There is therefore a precedent for refusing wind farm development because of the impact on tourism.
- 7.85** Whilst the precise impact of wind farms on tourism is not known, it is clear that appropriately sited and scaled developments with limited consequences for landscape character, scenic quality or major tourism assets have much less potential to influence the decisions of potential visitors.
- 7.86** In this case, the Environmental Statement includes a Zone of Theoretical Visibility (ZTV) demonstrating the extent of the area from which some or all of the wind turbines would be likely to be visible. This demonstrates that the wind farm would be visible from important areas within LLTNP, including Conic Hill, areas around Duck Bay, the Loch itself, parts of the West Highland Way, the A82 and Balmaha Harbour. LLTNP is one of only two National Park designations in Scotland and is an important visitor and tourist attraction. It is accepted that from the viewpoints chosen for detailed visual modelling in the applicant’s ES, there will be at least two viewpoints where the significance of the impact has been assessed as ‘*majorly adverse*’ and a further five viewpoints where they have been assessed as ‘*moderately adverse*’. Taking into consideration the quality of the existing landscape, it is considered that the wind farm will impinge on views both towards and from LLTNP, to the extent that it will have significant adverse effects upon the scenic qualities of the landscape, to the detriment of the recreational and tourism value of the wider area.
- 7.87** Whilst it is not possible to be conclusive about the extent of these impacts, or to quantify them in a manner which would warrant a specific reason for refusal based upon conflict with tourism economy interests, it is reasonable to conclude that the scenic value of the wider area around West Dunbartonshire, Loch Lomond and LLTNP, is significant in terms of scenic value and tourism importance. The development will impinge upon landscape character and intrude on key views to the extent that it ought to be regarded as unacceptable from a landscape and visual perspective. It is to be expected that there will be some implications for the tourism value of the surrounding area should the proposal be implemented, given that a significant number of visitors in Scotland are attracted by the scenic value of the natural landscape. Accordingly, inappropriately scaled development in a wider panoramic landscape is not considered to be in the interests of tourism and ought to be resisted.

Aviation Safety

- 7.88** The Ministry of Defence (MOD), Civil Aviation Authority NATS En Route Plc (NERL) and Glasgow Airport have been consulted in relation to any potential impacts on aviation. No objections were raised in terms of airport safeguarding or military low flying, subject to suitable red obstacle lighting being included as part of the development. However, NERL has objected to the proposal due to the potential detrimental impact on the Cumbernauld Radar Site. Although the applicant considered that this matter may ultimately be resolvable to the satisfaction of NERL, in the absence of an identified solution and agreement with NERL at this time, the proposal must be regarded as being detrimental to the interests of aviation safety and therefore contrary to policy DC3 of the West Dunbartonshire Local Plan (2010) and policy DS5 of the West Dunbartonshire Local Development Plan – Proposed Plan.

Electro-Magnetic Interference to Communications Systems

- 7.89** Telecommunications operators have been consulted to determine whether their systems would be affected by electro-magnetic radiation associated with electricity generation. Scottish Planning Policy highlights telecommunications interference as a material consideration in considering the acceptability of wind turbines. No impacts on television reception are anticipated due to the area now receiving television signals digitally.

Noise & Air Quality

- 7.90** There are two distinct types of noise sources within a wind turbine – the mechanical noise produced by the machine and the aerodynamic noise produced by the passage of the blades through the air. The Report which is the preferred method of assessing wind farm noise for planning purposes is; “The Assessment and Rating of Noise from Wind Farms” (Final Report, Sept 1996, DTI), (ETSU-R-97). This report describes a framework for the measurement of wind farm noise, which should be followed to assess and rate noise from wind energy developments, until such time as an update is available. This gives indicative noise levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable burdens on wind farm developers, and suggests appropriate noise conditions.
- 7.91** A further report produced by Hayes McKenzie for DECC entitled “An Analysis of How Noise Impacts are Considered in the Determination of Wind Farm Planning Applications” suggested that best practice guidance is required to confirm and, where necessary, clarify and add to the way ETSU-R-97 should be implemented in practice. This report also concludes that there is no evidence of health affects arising from infrasound or low frequency noise generated by turbines.
- 7.92** The most conclusive summary of the implications of low frequency wind farm noise for planning policy following on from the Hayes McKenzie report is given by the UK Government’s statement regarding the finding of the Salford University Report into Aerodynamic Modulation of Wind Turbine Noise

(September 2011). This study concluded that although Aerodynamic Modulation cannot be fully predicted, the incidence of Aerodynamic Modulation resulting from wind farms in the UK is low. Out of the 133 wind farms in operation at the time of the study, there were four cases where Aerodynamic Modulation appeared to be a factor. Complaints have subsided for three out of these four sites, in one case as a result of remedial treatment in the form of a wind turbine control system. In the remaining case, which is a more recent installation, investigations are ongoing.

- 7.93** The applicants have carried out background monitoring and have predicted noise emissions based on the anticipated turbine model. This has demonstrated that the operation of the wind farm is capable of meeting ETSU-R-97 standards at the nearest properties, the closest of which is 1.9km from the nearest proposed turbine location. Construction noise has been assessed in terms of the relevant British Standard (BS5228 (2009)) and appropriate working hours determined. The Council's Environmental Health Service have accepted the applicant's noise assessment and recommend conditions in the event of permission being granted.

Shadow Flicker

- 7.94** Government guidance advises that if adequate separation is provided between turbines and nearby dwellings "shadow flicker" should not be a problem. The closest dwelling in this case is 1.9km. The Council's Environmental Health Service have raised no objection in this regard although they have recommended that a condition is attached which would require the site operator to investigate any complaints and instigate appropriate mitigation measures to minimise the effects of shadow flicker.

Road Traffic Impact

- 7.95** The ES states that turbine components and other equipment would be delivered by road. There are two delivery options available and the Council's preferred route is via the A82, then the A811 through Balloch, leading onto Carrochan Road and finally Auchencarroch Road. Alternatively, deliveries could come via the A82 and turn off at the Lomondgate Roundabout and along the A813 before finally entering Auchencarroch Road. In order to use either of these routes, temporary alterations to the road would be required which would include removal of bollards and signage, temporary road surfacing, alterations to grass verges, removal of fencing/hedging, relocation of a power pylon and the removal of lighting columns. At the site access on Auchencarroch Road, the applicant would have to arrange for the use of land on the north side of the junction in order to allow vehicles to make the right turn. The area required will need to be made up of hardcore to the same level as the adjacent road, along with the removal of a hedge and the temporary relocation of a power pylon. It is anticipated that construction would take place over a 10 month period and would involve 90 abnormal load deliveries, 1050 heavy goods vehicle (HGV) deliveries and additional light goods vehicle (LGV) deliveries. The estimated peak would be during the first month of construction with around 68 HGV deliveries per week. Traffic mitigation measures identified during the construction period include the preparation of a Traffic Management Plan prepared in consultation with the Council's Roads

Service. This would address escorted deliveries, appropriate signage and traffic control, temporary removal of street furniture, specified programming and timing of deliveries and restrictions on access routes for construction vehicles. Both Transport Scotland and the Council's Roads Service have no objection to the proposal subject to conditions regarding the aforementioned issues.

Decommissioning

- 7.96** Should the Committee determine to grant planning permission for this proposal, a requirement for decommissioning and site restoration should be included in the planning conditions and a legal agreement for site restoration, which will be triggered by either the expiry of the permission or if the project ceases to operate for a specific period. This would ensure that at the end of the proposal's operational life: the turbines would be decommissioned and principal elements removed; the site would be restored to its former use leaving little if any visible trace of the turbines; the foundations, new tracks and hardstandings would be covered over with topsoil and reseeded; the cables would be de-energised and left in place and any cable marker signs removed; and the electrical substation building would be demolished to ground level with the foundation covered with topsoil and reseeded.

Proposal of Application Notice

- 7.97** The development is a major application and consequently, prior to the submission of the planning application, a Proposal of Application Notice (PAN) was submitted to the Planning Authority. The purpose of the PAN process is to encourage applicants to carry out consultation with affected communities and consultees prior to the submission of a planning application. Prior to the submission of this application, the applicant undertook a series of meetings with local community groups, including community councils and arranged two public events to provide information on their proposal. When the PAN was submitted, the proposal sought to erect 14 wind turbines, however when the application was submitted, the number of turbines proposed had been reduced to ten. Accompanying the planning application was a Pre-application Consultation Report (PAC) which summarised the feedback which the applicant received during the pre-application process, including from public events. Many of the issues raised are similar to those which have been raised by objectors in relation to this application.

Community Benefits

- 7.98** The applicant has indicated that surrounding communities will have the opportunity to secure the profits from a one turbine share or equivalent of the wind farm, as a means of generating revenue for local community projects. The establishment of a community fund is proposed by the applicant which would include the establishment of an Environmental and Educational Trust Fund, which would offer £2000 per MW of installed capacity from the operation of the wind farm for the benefit of the wider community around the wind farm and within West Dunbartonshire. This fund would aim to promote and fund approximately 40 additional pre-apprenticeship places at Clydebank College for 16-18 year olds.

- 7.99** A Community Share Scheme is also proposed which would be made available to communities close to the wind farm which have developed a local community action plan setting out clear aims and objectives of funding for future local projects. This could provide an opportunity for local communities to invest in the wind farm and own a one turbine equivalent share (ie. approximately 10%), or alternatively an annual fund worth £3,000 per MW of installed capacity shared between participating communities.
- 7.100** Scottish Planning Policy states that a range of benefits are often voluntarily provided by developers to communities in the vicinity of renewable energy developments and can include community trust funds. However, the prospect of financial benefit to a community is not a material consideration in the determination of planning applications.

8. CONCLUSION

- 8.1** Wind farms make an important contribution to Scotland's energy supply, and more such developments will be essential if the Scottish Government's commitment to reduce greenhouse gas emissions is to be achieved. By their very nature, wind farms are major pieces of infrastructure which often require exposed upland sites which tend to be environmentally sensitive and relatively conspicuous within the landscape. In assessing this particular proposal, it has been necessary to consider whether the acknowledged impacts upon the environment and landscape are sufficiently great in this instance to outweigh the benefits of expanding renewable energy generation and/or any economic benefit which would be brought to West Dunbartonshire.
- 8.2** The applicant has undertaken a detailed Environmental Impact Assessment, and the application has been subject to extensive consultation with technical agencies. On most issues, notably including the impact of the development upon local residents and the natural environment, there is agreement with the relevant consultees that the impacts of the proposal would be acceptable, subject to suitable conditions or planning obligations being put in place. However, there are two areas where significant objections are outstanding, and where the impact of the development is considered to be unacceptable.
- 8.3** Firstly, the applicant has not been able to reach agreement with NERL about the impact of the development on air traffic control radar. The applicant believes that this issue is capable of being resolved given time, but the issue has been outstanding for some time without being resolved. On the basis of NERL's continued objection it cannot be demonstrated that the proposal would have an acceptable impact on aviation safety, and therefore the proposal is contrary to policy DC3 of the adopted local plan.
- 8.4** Secondly, and perhaps more fundamentally, it is considered that the proposed development would have an unacceptable impact upon the landscape and the visual amenity of the Loch Lomond and The Trossachs National Park, the Loch Lomond National Scenic Area, and the Kilpatrick Hills Regional Scenic Area. Loch Lomond and its surrounding area is a landscape asset of national importance, which is currently relatively unspoiled by major man-made

development within the landscape. It is considered that the large turbines proposed would occupy a prominent position on the southern boundary of the National Park, and that the introduction of a significant man-made element on the horizon would significantly detract from the setting of the National Park / National Scenic Area. The application is subject to objections from both the Loch Lomond and Trossachs National Park Authority and Scottish Natural Heritage and a significant number of objections from the public, which raise significant concerns about the visual and landscape impact of the proposed development. Whilst recognising the importance of wind farms to society, it is considered important to safeguard the most valuable landscapes from unduly prominent wind farm developments, and it is considered that Loch Lomond is a location worthy of special protection. It is also considered that the proposal would have a significant detrimental impact upon the Kilpatrick Hills RSA, due to its close-quarter impact on viewpoints within the hills. Accordingly, it is considered that the proposal does not comply with Scottish Planning Policy and would be contrary to policies RSA1, DC6, GN1 and SUS1 of the adopted local plan, as well as to policies DS2, DS5 and GN4 of the West Dunbartonshire Local Development Plan – Proposed Plan.

- 8.5** Consideration has been given to whether amending the design of the proposed wind farm, for example by reducing the height of the turbines, would address the landscape concerns. However, whilst this might reduce the visual impact slightly it is considered that it would not address the fundamental issue of the site's position in the landscape and its relationship with the Loch Lomond area. Accordingly, it is not considered that the proposal can be made acceptable either by amendments or by way of conditions, and it is recommended that the application be refused. It is not considered that the renewable energy contribution and/or any economic benefit from the proposal are sufficiently great to outweigh the significant adverse impacts upon the environment and landscape.

9. REASONS FOR REFUSAL

- 1. The introduction of a wind farm into the Kilpatrick Hills would have a significant adverse visual and landscape impact on the Kilpatrick Hills Regional Scenic Area/Local Landscape Area. Therefore the wind farm would be unacceptable due to its detrimental impact on the Kilpatrick Hills Regional Scenic Area/Local Landscape Area and contrary to policies RSA1, DC6, GN1 and SUS1 of the West Dunbartonshire Local Plan (2010) and policies DS2, DS5 and GN4 of the West Dunbartonshire Local Development Plan – Proposed Plan.**
- 2. The proposed wind farm would have a significant adverse visual and landscape impact on the setting of Loch Lomond and the Trossachs National Park and the Loch Lomond National Scenic Area. Therefore the wind farm would be unacceptable due to its detrimental impact on Loch Lomond & The Trossachs National Park and the Loch Lomond National Scenic Area and contrary to policy DS5 of the West Dunbartonshire Local Development Plan – Proposed Plan and Scottish Planning Policy.**

3. The proposed wind farm would conflict with aviation safeguarding criteria which could endanger aviation safety and would be contrary to policies DC3 of West Dunbartonshire Local Plan (2010) and DS5 of West Dunbartonshire Local Development Plan – Proposed Plan.

Richard Cairns
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Date: 5 October 2013

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Appendix: 1. Landscape Character Types (LCT)

Background Papers: 1. Application forms, plans and Environmental Statement;
2. Consultation responses and letters of representation;
3. West Dunbartonshire Local Plan 2010;
4. Scottish Planning Policy;
5. Glasgow and the Clyde Valley Strategic Development Plan;
6. West Dunbartonshire Local Development Plan (WDLDP), Proposed Plan; and
7. Proposed Kilpatrick Hills Local Landscape Area – Draft Statement of Importance.

Wards affected: Ward 2 (Leven)