SUPPLEMENTARY PLANNING GUIDANCE (SPG)

REVISED VERSION

ONSHORE WIND ENERGY

(ISLE OF ANGLESEY SECOND PUBLIC CONSULTATION VERSION)

Isle of Anglesey County Council

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## APPENDIX 2

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1.0 Introduction

1.1 A development plan should contain sufficient policies and proposals to provide the basis for deciding planning applications. Supplementary Planning Guidance (SPG) is a means of setting out more detailed thematic or site specific guidance on the way in which the policies of a plan will be applied in particular circumstances or areas.

1.2 The current development plan for Ynys Môn consists of the adopted Gwynedd Replacement Structure Plan (1993) and the Ynys Môn Local Plan (1996). This SPG will therefore supplement policy C7 of the Structure Plan (1993) and policy 45 ‘Renewable Energy’ of the Local Plan (1996) which read:

**POLICY C7.** There will be a presumption in favour of renewable energy projects, provided that the impact upon the locality is acceptable to the local planning authority. Where applicable, the proposals should be supported by an environmental assessment.

45. Renewable energy projects will be permitted where it can be clearly demonstrated that there will not be any unacceptable impact on:-

- i. Landscape character.
- ii. Sites of international, national, or local importance for nature conservation.
- iii. Species which are of nature conservation importance.
- iv. The standard of amenity enjoyed by the resident and tourist population.
- v. Essential public services and communications.

1.3 Due to the advanced stage reached in the preparation of the Ynys Môn Unitary Development Plan (UDP) the stopped Ynys Môn UDP (2005) is used as a significant material planning consideration in dealing with current applications. Policy 8b in Part One refers to Energy Developments and policy EP18 refers to Renewable Energy, and will therefore need to be applied when dealing with planning applications for onshore wind turbines. These policies are highlighted below:

**PO8b.** Applications for the development of renewable and non-renewable energy resources will be permitted where it can be demonstrated that there will not be an unacceptable adverse impact upon the environment. Preference will be given to the development of clean and renewable energy sources, but proposals for non-renewable energy projects can be permitted if they encourage the maximum use of energy efficiency within their design.
**APPENDIX 2**

**EP18.** Renewable energy projects will be permitted where it can be clearly demonstrated that there will not be any significant adverse impact upon:-

i. Landscape character including sites of archaeological interest and their settings and the historic environment and / or;

ii. Sites of international, national, or local importance for nature conservation and / or;

iii. Species which are of nature conservation importance and / or;

iv. The standard of amenity enjoyed by the resident and tourist population and / or;

v. Essential public services and communications and / or;

vi. The existing water environment.

1.4 The Council consulted upon a draft SPG for Onshore Wind Energy between 16 December 2011 and 10 February 2012 and this resulted in the region of 900 representations being made.

1.5 Due to the issues raised and the recommendations accepted by the Council's Members the draft SPG has been subject to significant changes. In light of these changes the Council has agreed to undertake a second public consultation exercise on the document.

1.6 To explain the changes within the revised SPG, and to justify why all the issues raised within representations to the draft version have not been included in the revised version, this SPG should be read in conjunction with the Environment and Technical Services Scrutiny Committee report of the 26 July 2012.

1.7 In order to conform to the Council’s Committee reporting diary it will be necessary to begin the consultation period on the revised SPG during the holiday season. The Council have therefore decided to extend the consultation period from 6 weeks to 8 weeks.

1.8 Whilst the adopted Development Plan policies listed above are applicable for all types of renewable energy technologies the focus of this SPG is for onshore wind energy. This is due to the number of applications that the Local Planning Authority has had to deal with over the past couple of years. Other types of renewable energy proposals will still be considered against these policies and other applicable local and national planning policies.

1.9 Due to the nature of this subject matter a number of technical terms are used. To assist the reader a Glossary of Terms is included in section 15 of the SPG.
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2.0 Background

2.1 Ynys Môn adopted an SPG on Wind Energy Development in 1994. This was prepared as a response to the emerging technology of wind turbines and was aimed at giving guidance over potential sites on the Island for wind farms as opposed to single or small groups of wind turbines.

2.2 Over the past couple of years the nature of wind turbine applications has changed with the Authority having to deal with applications mainly for single turbines and up to three in certain cases throughout the Island rather than for specific wind farms as was the case back in 1994.

2.3 In the period June 2010 to June 2012 the authority has been dealing with:

<table>
<thead>
<tr>
<th>Type of Application</th>
<th>Number of Applications Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Applications</td>
<td>75</td>
</tr>
<tr>
<td>Scoping Applications</td>
<td>2</td>
</tr>
<tr>
<td>Full Applications</td>
<td>48</td>
</tr>
</tbody>
</table>

(7 granted conditionally, 9 withdrawn, 2 returned to applicant, 4 refused and 26 not yet decided)

2.4 In addition to the criteria set out within the development plan and stopped UDP policies highlighted in section 1.0 above regard must be given towards other detailed policies within these plans. These include detailed policies over protection for the landscape, nature conservation, coastal development, archaeology, protection for high quality agricultural land, built heritage as well as a general policy which refers to effect on residential amenities. National planning policies and guidance about these topics are also significant material planning considerations.

2.5 The number of environmental designations within the area reflects its natural beauty, which is the area’s main attraction as a tourist destination. The tourism industry is an important driver in the local economy of an area which has the lowest Gross Value Added (GVA) in the UK at just 55.1% of the UK average with relative high levels of economic inactivity.

2.6 In dealing with wind turbine applications a balance needs to be made between this technology’s contribution towards national targets for renewable energy against any adverse impact the proposal may have on the factors listed in paragraph 2.4 above.
2.7 The aim of the SPG therefore is to:

- assist and guide applicants and agents regarding the information required at the pre-application, screening, scoping and planning application stages.

- assist case officers and the planning committee in making informed decisions on wind turbine applications. This will be a means of promoting a consistent approach when dealing with planning applications.

- help ensure that the wider benefits resulting from renewable energy generation are balanced with local issues such as landscape, biodiversity, economic, social and amenity impacts on local communities.
3.0 Policy Context

3.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes.

3.2 Section 12.8 of PPW and TAN 8 provide specific policy and guidance in relation to Renewable and Low Carbon Energy production.

3.3 The consenting process for renewable energy projects in Wales depends on the size and location of the proposed renewable development. Onshore wind energy schemes up to 50MW will be dealt with by the Local Authority and Welsh Ministers. Schemes above 50MW will be dealt with by the Secretary of State for Energy & Climate Change/ Infrastructure Planning Commission/Appropriate Secretary of State.

Planning Policy Wales (Edition 4 – Feb 2011)

3.4 Paragraph 12.8.1 of PPW states that the UK is subject to the requirements of the EU Renewable Energy Directive and these include a UK target of 15% of energy from renewables by 2020. The Welsh Government is committed to playing its part by delivering an energy programme which contributes to reducing carbon emissions as part of their approach to tackling climate change.

3.5 The Welsh Government’s Energy Policy Statement (2010) identifies the sustainable renewable energy potential for a variety of different technologies. In relation to onshore wind the aim is:

*To have 4.5 kWh/d/p of installed onshore wind generation capacity by 2015/17.*

(kWh/d/p – Kilowatt hours per day per person based on population of 3 million).

To do this the Welsh Government will optimise the use of existing strategic search areas set out in TAN 8 and through promoting further use of brownfield or local sites for smaller-scale projects appropriate to their locations.

3.6 Annex 1 in the Welsh Government’s Energy Policy Statement (2010) gives the electricity generating capacity on all proposed equal or greater than 10 MW (together with a figure for onshore wind under 10 MW). In 2010 for onshore wind the current capacity stood at 0.73 kWh/d/p.

3.7 In Energy Wales: A Low Carbon Transition (2012) the Welsh Government sets out its Programme for Government which seeks to “create a sustainable, low carbon economy for Wales”. It focuses upon job opportunities within this sector and has specific reference to ‘Anglesey Energy Island’. It identifies the challenges and opportunities involved with nuclear decommissioning and new build, offshore wind development, biomass development, energy efficiency activity and infrastructure enhancements associated with the energy development.
3.8 Below are extracts from PPW which gives support for renewable energy projects including onshore wind development:

<table>
<thead>
<tr>
<th>Part of PPW</th>
<th>Summary of Issue Raised</th>
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| Paragraph 12.8.9  | States that Local Planning Authorities (LPA) should facilitate the development of all forms of renewable and low carbon energy to move towards a low carbon economy. The relevant factors for onshore wind turbines that should be considered are:  
|                   | • the contribution the area can make;                                                    |
|                   | • ensuring development control decisions are consistent with climate change obligations including contributions to renewable energy targets and aspirations; and |
|                   | • recognising the environmental, economic and social opportunities they make to planning for sustainability. |
| Paragraph 12.8.12 | Strategic scale wind energy continues to offer the greatest potential and is a key part of meeting the Welsh Government’s vision for future renewable electricity production. |
| Paragraph 12.8.19 | Specific support for community driven renewable energy projects.                         |
| Paragraph 12.9.7  | The potential from urban / industrial brownfield sites is identified.                    |
| Paragraph 12.9.9  | Developments at a scale of between 50kW and 5MW are identified as Sub Local Authority. Projects within this threshold are applicable in all parts of Wales and development plans should encourage such development and clearly set out the local criteria against which such proposals would be evaluated. |

3.9 Other parts of PPW highlight issues that need to be considered when dealing with such applications:

<table>
<thead>
<tr>
<th>Part of PPW</th>
<th>Summary of Issue Raised</th>
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<tbody>
<tr>
<td>Paragraph 12.8.13</td>
<td>States the most appropriate locations for large scale wind farm development are identified as Strategic Search Areas (SSAs). Developments in these locations are expected to contribute significantly to the WGs onshore wind energy aspirations.</td>
</tr>
</tbody>
</table>
| Paragraph 12.8.12 | Highlights that:  
|                   | • designated areas, species and habitats and historic environment are protected;       |
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<table>
<thead>
<tr>
<th>Part of PPW</th>
<th>Summary of Issue Raised</th>
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<tr>
<td></td>
<td>• mitigation measures are required for potential detrimental effects on local communities whilst ensuring the potential impact on economic viability is given full consideration; and • renewable and low carbon energy in new developments should be optimised.</td>
</tr>
</tbody>
</table>

Paragraph 12.8.12 The Welsh Government accepts that the introduction of new, often very large structures for onshore wind needs careful consideration to avoid, and where possible minimise their impact.

Paragraph 12.8.14 The development of large wind farms or other large scale renewable and low carbon energy schemes will not generally be appropriate in internationally or nationally designated areas and sites.

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**TAN 8 – Planning for Renewable Energy (2005)**

3.10 The TAN sets out the major land use planning aspects of renewable energy technologies in Wales. This section focuses upon the issues relevant for onshore wind power.

3.11 Below are extracts from TAN 8 which give support for renewable energy projects including onshore wind development:

<table>
<thead>
<tr>
<th>Part of TAN 8</th>
<th>Summary of Issue Raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paragraph 2.2</td>
<td>Stated that onshore wind power has the greatest potential for an increase in generation of electricity from renewable energy in the short to medium term.</td>
</tr>
<tr>
<td>Paragraph 2.11</td>
<td>Potential from urban / industrial brownfield sites is so far largely untapped, sites of up to 25MW on such sites should be encouraged.</td>
</tr>
<tr>
<td>Paragraph 2.12</td>
<td>Provides encouragement for smaller community based wind farm schemes (generally less than 5MW).</td>
</tr>
<tr>
<td>Paragraph 2.14</td>
<td>There will be opportunities to re-power and / or extend existing wind farms which may be located outside SSAs and these should be encouraged provided that the environmental and landscape impacts are acceptable.</td>
</tr>
</tbody>
</table>

3.12 Other parts of TAN 8 highlight issues that need to be considered when dealing with such applications:
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<table>
<thead>
<tr>
<th>Part of TAN 8</th>
<th>Summary of Issue Raised</th>
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</thead>
<tbody>
<tr>
<td>Paragraph 2.4</td>
<td>The TAN identifies 7 strategic search areas (SSAs) which can accommodate large scale onshore wind power schemes. None of these areas are located within Ynys Môn.</td>
</tr>
<tr>
<td>Paragraph 2.7</td>
<td>Large parts of Wales excluded from consideration as SSAs in particular large wind proposals within the Area of Outstanding Natural Beauty would be contrary to well established planning policy and therefore not considered in these areas. Similarly the highest level of nature conservation and heritage designations have also been excluded.</td>
</tr>
<tr>
<td>Paragraph 2.13</td>
<td>Most areas outside SSAs should remain free of large wind power schemes. Local planning authorities may wish to consider the cumulative impact of small schemes in areas outside of the SSAs and establish suitable criteria for separation distances from each other. There needs to be a balance between desirability of renewable energy and landscape protection. Whilst that balance should not result in severe restriction on the development of wind power capacity, there is a case for avoiding a situation where wind turbines are spread across the whole of a county. Developments over 5MW outside SSAs and urban / industrial brownfield sites may be refused.</td>
</tr>
<tr>
<td>Paragraph 2.15</td>
<td>Encourages developers to take an active role in engaging with the local community on renewable energy proposals.</td>
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</table>

3.13 Paragraph 12.10.1 of PPW summarises the issues that should be taken into account in determining an application for renewable and low carbon energy development and associated infrastructure. These issues are summarised below:

- the contribution a proposal will play in meeting identified national, UK and European targets;
- the wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development;
- the impact on the natural heritage, the Coast and the Historic Environment;
- the need to minimise impacts on local communities, to safeguard quality of life for existing and future generations;
- ways to avoid, mitigate or compensate identified adverse impacts;
- the impacts of climate change on the location, design, build and operation of renewable and low carbon energy development. In doing so consider whether measures to adapt to climate change impacts give rise to additional impacts;
- grid connection issues where renewable (electricity) energy developments are proposed; and
the capacity of, and effects on, the transportation network relating to the construction and operation of the proposal.

Energy Island Programme

3.14 The Anglesey Energy Island Programme is a collective effort between several stakeholders within the public and private sector (including UK Government and Welsh Government) working in partnership to put Anglesey at the forefront of energy research and development, production and servicing, bringing with it potentially huge economic rewards. The programme has been created and is led by Isle of Anglesey County Council.

3.15 A report on the Potential Outcomes and Performance Measures from the Energy Island programme was adopted by the Ynys Môn Board of Commissioners in October 2011.

3.16 In relation to onshore wind support is given towards micro generation which covers micro and small wind proposals. The code for sustainable homes is seen as a major driver in terms of new build and could stimulate a market for onsite measures of £2.3 billion per year by 2016. In relation to wind turbines the market size (UK) is estimated as being:

- Small wind (5-20kW) £204 million per year by 2016;
- Micro wind £78 million per year by 2016.

(Source: Energy Island: Potential opportunities and economic impacts (URS, 2010)

Area of Outstanding Natural Beauty (AONB) Management Plan (2009-2014)

3.17 The Management Plan, which is an adopted statutory plan, includes a report on the current state of the AONB and details key changes since the production of the first plan in 2004. It also outlines the Vision (up to 2049) together with the Strategy and Actions for the future sustainable management of the AONB over the next 5 years.

3.18 The main purpose of AONBs is to conserve and enhance the natural beauty of the designated area.

3.19 Support is given towards appropriate scale renewable energy generation within the AONB in section CLC 2, as shown below:

“CLC 2 Renewable Energy

CLC 2.1 Encourage and support energy conservation measures in order to help meet National and regional targets for energy consumption.

CLC 2.2 Encourage and support the development of appropriate scale renewable energy generation in order to help meet national and regional targets for renewable energy generation.”

3.20 However, these policies are balanced against development policies that seek to prevent inappropriate development in section CCC 3, as shown below:
“CCC 3 Development

CCC 3.1 Subject all development proposals within the AONB to rigorous assessment to minimise inappropriate development which will damage the special qualities and character of the AONB or the integrity of the European sites.”

Destination Management Plan (DMP) (2012-2016)

3.21 The Destination Management Plan is a plan for all those with an interest in the future of tourism in Anglesey. It sets the parameters for tourism development within Anglesey for the next 4 years. The target is to aim for a realistic growth of 1-2% per annum in value terms or 5% overall growth over the next four years.

3.22 The plan recognises the important role that tourism plays in the local economy. According to the STEAM model it injects £233m into the local economy and supports over 4,000 jobs on the Island.

3.23 The primary attraction is the beautiful and varied coastline and excellent beaches linked by the Coastal Path. The draft Isle of Anglesey County Council Corporate Strategy also identifies tourism as a key priority.

3.24 One threat that has been identified in the plan is inappropriate development in the landscape or too close to tourism facilities (e.g. wind turbines / pylons).

Health, Social Care and Wellbeing Strategy for Anglesey (2011-2014)

3.25 The National Health Service Wales Act (2006) places a duty on each Local Authority and Health Boards in Wales to prepare a Health, Social Care and Wellbeing Strategy. This strategy has been developed jointly with the Betsi Cadwaladr University Health Board.

3.26 The strategy focuses on future planning and commissioning priorities for service delivery to improve the health and wellbeing of the population. In addition an emphasis has been placed on identifying and tackling the wider determinants of health and reducing health inequalities.
4.0 Characteristics of Anglesey

4.1 The topography of the island is generally subdued with a rolling, undulating pattern interspersed by harder, rocky outcrops such as Holy Island, Mynydd Parys, Mynydd Bodafon and Mynydd Llwydiarth. The landform falls east to west, with a number of low lying areas along the western coast including Aberffraw, Malltraeth Marsh and Newborough Warren. This landform pattern is reflected in the north east – south west alignment of water courses.

4.2 This general character belies a complex, underlying geology and effects of geomorphological processes such as glaciation. The island contains some of the oldest rocks in Wales and Britain as a whole, and these are clearly illustrated in the topography of the island. Extensive tree cover is generally scarce, although ancient semi-natural woodlands are found along the Menai Strait, and extensive plantations can be found around Mynydd Llwydiarth and Newborough Warren. The island shows a rich cultural history with evidence of man’s actions extending over some 8000 years. There are over 200 Scheduled Ancient Monuments ranging from Bronze Age burial chambers to later medieval features. More recent landscape features include the planned landscapes of large estates, such as Plas Newydd, major transportation routes, industrial features including nuclear power and wind farms. The rich variation and quality in the coastal landscape is reflected in its designation as an Area of Outstanding Natural Beauty.

4.3 The coastal zone of Anglesey was designated as an AONB in 1966 and was confirmed in 1967. It was designated in order to protect the aesthetic appeal and variety of the island’s coastal landscape and habitats from inappropriate development. Some of the main features of the Anglesey AONB are:

- low cliffs alternating with coves and pebble beaches
- sheer limestone cliffs interspersed with fine sandy beaches
- stretches of sand dunes with beaches

4.4 The AONB covers most of Anglesey’s 201 kilometre (125 miles) coastline but also encompasses Holyhead Mountain and Mynydd Bodafon. Substantial areas of other land protected by the AONB form the backdrop to the coast. The approximate coverage of the Anglesey AONB is 221sq kms (21,500 hectares), and it is the largest AONB in Wales covering as it does one third of the island. The AONB is home to approximately 7000 people and local employment is mainly based on agriculture and tourism.

4.5 The AONB also takes in three sections of open, undeveloped coastline which have been designated as Heritage Coast. These non-statutory designations complement the AONB and cover approximately 50kms (31 miles) of the coastline.

4.6 The Isle of Anglesey Coastal Path forms part of the All Wales Coastal Path. In fact the National Path was developed out of a desire to build on the economic success of the Pembroke Coast Path National Trail and the Anglesey Coastal Path, both of which are major contributors to the visitor economy of Wales. This also shows the importance of the coast to the landscape.
4.7 Approximately 2 million people visit the island each year attracting people from North Wales the North West of England and also visitors from overseas. The most popular forms of recreation include sailing, angling, cycling, walking, wind surfing and jet skiing.

4.8 Due to the lowland nature of the Island Ynys Môn has a settlement pattern that consists of many small centres and isolated clusters dispersed throughout the Island. Statistical Focus on Rural Wales (2008) states that the fact that two areas have similar number of people per square kilometre e.g. Ynys Môn and Denbighshire, can conceal significant differences between areas. In Ynys Môn most people live in small settlements that are quite evenly spaced across the Island.
5.0 Areas of Constraints

5.1 This section highlights the sensitive receptors (protected areas or species including humans) on the Island that needs to be considered with any application. The boundary of a designated area does not imply there should be a sharp barrier between conservation values within, and disregard of such values outside. Therefore, consideration also needs to be given towards its setting or in the case of biodiversity interests the potential impact of development outside the site e.g. flight paths, changes to the hydrology of wetland sites etc.

5.1.1 The section then uses the Best Practice Guidance published by the Welsh Government to map all of these constraints to produce a strategic, high level assessment of the accessible wind power potential for an area.

5.2 Areas of Outstanding Natural Beauty (AONB)

5.2.1 National Parks and Access to the Countryside Act provides the statutory basis for the designation of AONBs. The CRoW Act 2000 affords them the same protection as National Parks in terms of landscape and scenic beauty and gave a statutory duty to produce and publish an AONB Management Plan. There is a duty on any public body, under section 85 of the CRoW Act, to have regard to the purpose of conserving and enhancing the natural beauty of the AONB. This is the primary objective although it will also be appropriate to have regard to the economic and social well-being of the area. The special qualities of Anglesey’s AONB help define the designation.

5.2.2 The protection for AONBs and National Parks is highlighted within paragraph 8.4 of Annex D in TAN8 which states:

“There is an implicit objective in TAN 8 to maintain the integrity and quality of the landscape within the National Parks/AONBs of Wales i.e. no change in landscape character from wind turbine development.”

5.2.3 In accordance with National and Local Planning Policies (PPW para 5.3.5 to 5.3.7, 12.9.9, TAN 8 para 2.12, policy 30 Ynys Môn Local Plan and policy EN2 stopped UDP) Medium and Large wind turbines within the AONB will not be supported. Micro and small scale developments (up to 20m to tip height) will only be supported if they demonstrate they conserve and enhance the natural beauty of the AONB.

5.2.4 Outside the AONB no turbine proposal should cause significant harm to the setting of the designated landscape or National Park. A LVIA will need to be carried out to show any potential impact of a scheme to ensure no significant harm will occur as a result of the proposal.

5.3 Historic Landscapes & Historic Parks and Gardens of Special Interest in Wales

5.3.1 Registers for Historic Landscapes, Parks and Gardens of Special Interest in Wales are a material consideration in the planning process. Information on the boundaries of these non-statutory designations can be found in Cadw’s ‘Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales – Conwy, Gwynedd and the Isle of Anglesey’ (1998).

5.3.2 Reference should be given to Cadw’s ‘Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process’ (2007). The document provides detailed guidance on the ‘Assessment of the Significance of the Impact of Development on Historic Landscape Areas on the Register of Landscapes of Historic Interest in Wales’ (ASIDOHL2).

5.3.3 In accordance with the applicable development plan policies, proposals should not cause significant harm to the integrity of important international sites, whether situated within or impacting upon the designation.

5.4 International Ecological Designations

5.4.1 Paragraph 5.3.9 of PPW states that the Government will ensure that internationally statutorily designated nature conservation sites will be protected from damage and deterioration, with their important features conserved by appropriate management. Detailed guidance in relation to development proposals that may affect an International Designated site is contained in Annex 3 of TAN 5. This should be referred to with any proposal that may affect such a site.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Ramsar Sites</td>
<td>Wetland areas of international importance</td>
</tr>
<tr>
<td>Special Areas of Conservation (SAC)</td>
<td>Areas that contribute to the maintenance or restoration of favourable conservation status of habitats or species listed in Annexes I and II of the Habitats Directive.</td>
</tr>
<tr>
<td>Special Protection Areas (SPA)</td>
<td>Designated areas that help conserve habitats for rare and vulnerable species and migratory species of birds.</td>
</tr>
</tbody>
</table>

5.4.2 In accordance with the applicable development plan policies, proposals should not cause significant harm to the integrity of important international sites, whether situated within or outside the designation and should compensate for losses where damage is unavoidable.
5.4.3 Any proposal that is likely to affect the conservation objectives of a European Site must provide sufficient information about the proposed development so that an informed judgement can be made as to its likely effects. Those failing to do so will be refused under regulation 61 of the Habitat and Species Regulation 2010.

5.5 National Ecological Designations

5.5.1 With regard to SSSIs, which are of national importance, the Wildlife and Countryside Act, as amended by the Countryside and Rights of Way Act 2000, places a duty on all public bodies (including local planning authorities) to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of the features by reason of which a SSSI is of special interest. SSSIs can be damaged by developments within or adjacent to their boundaries, and in some cases, by development some distance away. Paragraph 5.5.8 of PPW states that there is a presumption against development likely to damage a SSSI.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites of Special Scientific Interest (SSSI)</td>
<td>SSSIs are areas of land designated as being of national nature conservation interest.</td>
</tr>
<tr>
<td>National Nature Reserves (NNR)</td>
<td>Areas of national nature conservation importance are designated as NNRs.</td>
</tr>
</tbody>
</table>

5.5.2 In accordance with the applicable development plan policies, proposals should not significantly harm the conservation objectives of a site designated as being of national wildlife importance, whether situated within or outside the designation and should compensate for losses where damage is unavoidable.

5.6 Local Ecological Designations

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Nature Reserves (LNR)</td>
<td>Designated for local interest by the Council.</td>
</tr>
<tr>
<td>Candidate Wildlife Sites (CWS) / Wildlife Sites (WS)</td>
<td>Non-statutory sites deemed to be of special ecological value.</td>
</tr>
</tbody>
</table>

5.6.1 Where a proposal is likely to have a significant harm on an LNR or CWS/WS, it should only be permitted if it can be demonstrated that there are reasons for the proposal that outweigh the need to safeguard the nature conservation value of the site and that impacts can be mitigated and compensated.

5.7 Surveys for Designated Ecological Sites

5.7.1 Concerning designated ecological sites, ecological surveys are most likely to be required for applications situated in close proximity to such sites.

5.8 Heritage Designations
5.8.1 Proposals should not cause significant harm to the character and appearance of Conservation Areas, Listed Buildings, Scheduled Ancient Monuments, World Heritage Sites or Heritage Coasts or their setting. A suitable assessment will need to be carried out to clearly demonstrate no significant harm will occur as a result of the proposal.

5.8.2 All screening opinion requests, scoping opinion requests and full applications for wind turbine schemes within one of these environmental designations or impacting upon its setting, views to/from or between should be referred to the Council’s Building Conservation Officer and Cadw.

5.9 Aviation Interests

5.9.1 The movement of a wind turbine can interfere with radar as it may be interpreted as a moving object. This could cause it to be mistaken for an aircraft or reduce the ability to track aircraft by radar in the vicinity of a wind energy development.

5.9.2 Developers will need to consult with radar operators if a proposal falls within a 15km consultation zone, or the 30-32km advisory zone around both civil and military air traffic radar, respectively. Guidance is available to assist developers on the Civil Aviation Authority’s web-site (http://www.caa.co.uk/default.aspx?catid=1959).

5.9.3 National Air Traffic Services (NATS) has advised that it wishes to be consulted on all planning applications or ‘Notice of Intent to Develop’ proposals for wind turbine developments irrespective of scale.

5.9.4 On Anglesey there are two sites being RAF Valley and Mona. For the purpose of strategic assessment at the end of this section a 5km buffer has been used around these sites. This is in line with the Best Practice Guidance.

5.10 Broadcasting Installations

5.10.1 Wind turbines can interfere with electromagnetic transmissions by emitting an electromagnetic signal itself, interfering with electromagnetic signals.

5.10.2 Early consultation should be sought with the Office of Communications (OFCOM), who hold a central register of all civil radio communications operators in the UK and acts as a central point of contact for identifying specific consultees relevant to a site.

5.11 Residential and Tourism Receptors

5.11.1 Section 7.0 of the SPG refers to a number of Key Issues that need to be evaluated in terms of the potential impact of proposals on residential and tourism receptors.

5.11.2 For the purpose of the exercise in section 5.12 below, and in line with the best practice guidance a buffer of 500m was used with every residential address point on the Island.
5.12 Wind Power Potential on Ynys Môn – Strategic Assessment

5.12.1 Based on the Welsh Government Best Practice Guidance – Planning for Renewable & Low Carbon Energy – A Toolkit for Planners (2010) a strategic high level assessment of the accessible wind power potential was undertaken. This involves using Geographical Information System (GIS) to map a variety of different constraints to identify the total area of land that is potentially suitable for wind development.

5.12.2 Regard must be given towards the strategic nature of this exercise and that issues such as existing features in the landscape e.g. wind turbines, telecommunication masts etc., and their cumulative impact has not been evaluated.

5.12.3 The maps below are based upon turbines up to a tip height of 20.1m and 65.1m since these are the threshold between small and medium turbines (20.1m) and medium and large turbine (65.1m). The categorisation of different sizes of turbines is to be had in section 6.0 of the SPG.
APPENDIX 2

Map 1 – Strategic Assessment 20.1m to tip height

Map 2 – Strategic Assessment 65.1m to tip height
5.12.4 The areas in red and orange are the areas of potential on the Island. Nonetheless proposals for wind turbine developments within these areas would still require detailed assessment against all the relevant national and local policies before they can be supported.
6.0 **Types and Sizes of Wind Turbines**

6.1 In this section the two main types of turbine technology is highlighted. It also provides a definition, for the purpose of this SPG, about what is a micro, small, medium and large development in terms of size of individual turbines, scale of windfarms and electrical output.

**Types of Wind Turbines**

6.2 There are two main types of wind turbines – vertical axis wind turbines (VAWT) and horizontal axis wind turbines (HAWT) as demonstrated in the figure below:

![Vertical Axis Wind Turbines](image)

**Vertical Axis Wind Turbines**

6.3 Vertical axis wind turbines (VAWTs) have the main rotor shaft arranged vertically. With a vertical axis, the generator and other components can be placed near the ground so the tower does not need to support it, which also makes maintenance easier. The advantages of VAWTs include:

- Have less impact on landscape and may be built at locations where taller structures are prohibited
- They have a greater surface area for energy capture;
- Are more efficient in gusty winds;
- Can be located nearer the ground, making it easier to maintain the moving parts;
- Have lower start-up speeds than HAWTs;
- Situated close to the ground can take advantage of locations where rooftops, hilltops, ridgelines and passes funnel wind and increase wind velocity.
6.4 The disadvantages of VAWTs include:

- Most VAWTs have an average decreased efficiency from a common HAWT, mainly because of the additional drag that they have as their blades rotate into the wind. Versions that reduce drag produce more energy, especially those that funnel wind into the collector area;
- Having rotors located close to the ground where wind speeds are lower do not take advantage of higher wind speeds above.

**Horizontal Axis Wind Turbines**

6.5 Horizontal axis wind turbines (HAWT) are the most common style of wind turbines. They have a similar design to a windmill, and the blades look like a propeller that spin on the horizontal axis. HAWTs have the main rotor shaft and electrical generator at the top of the tower, and may be pointed into or out of the wind. The advantages of HAWTs include:

- Variable blade pitch which gives the turbine blades the optimum angle of attack;
- The tall tower base allows access to stronger wind in sites with wind shear. In some wind shear sites, every ten metres up, the wind speed can increase by 20% and the power output by 34%;
- High efficiency since the blades always move perpendicularly to the wind, receiving power through the whole rotation.

6.6 The disadvantages of HAWTs are:

- Their height makes them obtrusively visible across large areas, disrupting the appearance of the landscape and sometimes creating local opposition;
- The tall towers and blades up to 90 meters long are difficult to transport. Transportation can now cost 20% of equipment costs;
- Tall HAWTs are difficult to install, needing very tall and expensive cranes and skilled operators;
- Massive tower construction is required to support the heavy blades, gearbox, and generator;
- Reflections from tall HAWTs may affect side lobes of radar installations creating signal clutter, although filtering can suppress it;
- Downwind variants suffer from fatigue and structural failure caused by turbulence when a blade passes through the tower’s wind shadow (for this reason, the majority of HAWTs use an upwind design, with the rotor facing the wind in front of the tower);
- Require an additional yaw control mechanism to turn the blades toward the wind.

**Size of Turbine – Height to blade tip**

6.7 The “Practice guidance: Planning implications of renewable and low carbon energy development” (February 2011), published by the Welsh Government, as well as guidance published by other national or local governments assist in providing a
definition of different scales of turbines. These guidelines have enabled the categorisation of turbines as illustrated in the table below.

6.8 Their relationship with their surroundings will be a key consideration with regards to the size of any proposed turbine(s).

<table>
<thead>
<tr>
<th>Typical height range of wind turbines</th>
<th>Micro/domestic</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 11m to blade tip</td>
<td>Up to 20m to blade tip</td>
<td>Up to 65m to blade tip</td>
<td>Up to 135m to blade tip</td>
<td></td>
</tr>
</tbody>
</table>

6.9 or the purpose of clarity in relation to different types of applications the Council will use this height range categorisation to define small, medium and large turbines as a basis for dealing with onshore wind turbine applications. It is often difficult to judge the size of a turbine without something to scale it against. Table 1 shows the relative heights of elements found in the landscape which may be located near to proposed turbines.

Table 1 – Height of Landscape elements

<table>
<thead>
<tr>
<th>Landscape element</th>
<th>Height in metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single storey house</td>
<td>5 metres</td>
</tr>
<tr>
<td>1.5 to 2 storey house</td>
<td>6 – 10 metres</td>
</tr>
<tr>
<td>Farmyard grain silo</td>
<td>10 metres</td>
</tr>
<tr>
<td>Telegraph pole</td>
<td>10.5 metres</td>
</tr>
<tr>
<td>Mature forest trees</td>
<td>20 metres</td>
</tr>
<tr>
<td>Pylon</td>
<td>Usually around 30 - 35 metres</td>
</tr>
</tbody>
</table>

Size of Turbines – Electrical Output

6.10 Wind turbines are usually defined by the “rated capacity” which is measured in kilowatts (kW) or megawatts (MW). The “rated capacity” equates to the maximum electrical output. It is worth noting that:

• an increase in the rotor diameter of a wind turbine will result in a greater than proportional change in rated power.
• power output is proportional to the cube of the wind speed, and hence a doubling of wind speed will result in a roughly eight-fold increase in power output. A wind turbine on a site which has an annual mean wind speed of 6 m/s (m/s = meter per second) will typically produce only half as much energy as the same machine on a site where the annual mean wind speed is 8 m/s (TAN8).

6.11 The following table provides a broad indication of the power and the potential number of homes supplied by the different types of turbines outlined above.
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Typical scales of individual wind turbine technologies

<table>
<thead>
<tr>
<th>Scale</th>
<th>Power (kW)</th>
<th>Typical Turbine Rating</th>
<th>Potential No. of Homes Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Less than 2.5kW</td>
<td>2.5kW</td>
<td>0.7</td>
</tr>
<tr>
<td>Small</td>
<td>1.5 – 50kW</td>
<td>20kW</td>
<td>6</td>
</tr>
<tr>
<td>Medium</td>
<td>50kW – 750kW</td>
<td>500kW</td>
<td>205</td>
</tr>
<tr>
<td>Large</td>
<td>Above 750kW</td>
<td>2.5MW</td>
<td>1,536</td>
</tr>
</tbody>
</table>


Scale of Wind farms

6.12 There is no clear definition of what constitutes a wind farm as opposed to multiple individual wind turbine applications in relative close proximity. However, the Table in Schedule 2 of the Environmental Impact Assessment Regulations (2008/2093) in relation to section 3 ‘Energy Industry’ in sub-section (i) refers to:

“Installations for the harnessing wind power for energy production (wind farms)”.

In the applicable threshold and criteria column reference is made to

“(i) The development involves the installation of more than 2 turbines…”

6.13 In order to ensure consistency when dealing with different types of applications the SPG will identify any proposal for more than 2 turbines to constitute a wind farm.

6.14 Large wind farm developments are expected to be located within SSAs identified in TAN 8. No SSA is identified on Ynys Môn. The potential from urban / industrial brownfield sites of up to 25MW proposals are encouraged in TAN 8. Due to the limited industrial heritage of Ynys Môn opportunities on such sites are considered to be scarce on the Island.

6.15 Paragraph 2.13 of TAN 8 states that for areas outside of SSAs and urban/industrial brownfield sites the Welsh Government would support a restriction on almost all wind energy developments larger than 5MW.

6.16 In light of this new wind farm developments should be limited to a maximum output of 5MW.

6.17 The exception to this would be proposals for repowering of existing wind farms on the Island which is supported in paragraph 2.14 of TAN8. Having regard to the approach in TAN 8 regarding the scale of development that could be supported on urban/industrial brownfield sites such repowering wind farm developments should be limited up to 25MW.

6.18 Due to the significant variation in the size of turbines and electrical output the SPG does not include windfarm typologies. The detailed assessment work required with any scheme will determine whether the scale of a wind farm, within the above mentioned energy output thresholds, can be accommodated on the Island.
Cumulative energy output assessment

6.19 Over the past couple of years the vast majority of applications received on the Island have been for either individual or up to two turbines. Whilst other parts of this SPG ensures that the cumulative visual and noise impacts of adjacent proposals are taken into account, consideration needs to be given to the overall energy output of multiple individual applications. This is to ensure that a large wind farm i.e. wind energy developments larger than 5MW, is not created through individual applications.

6.20 An assessment of the density on the existing wind farms on the Island gives the following density levels:

<table>
<thead>
<tr>
<th>Wind Farm</th>
<th>Total site Area (ha) (site planning area)</th>
<th>Number of Turbines</th>
<th>Density Level (Turbine per ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhyd y Groes</td>
<td>280</td>
<td>24</td>
<td>11.7ha</td>
</tr>
<tr>
<td>Trysglwyn</td>
<td>120</td>
<td>19</td>
<td>6.3ha</td>
</tr>
<tr>
<td>Llyn Alaw</td>
<td>500</td>
<td>34</td>
<td>14.7ha</td>
</tr>
<tr>
<td>Overall</td>
<td>900</td>
<td>77</td>
<td>11.6ha</td>
</tr>
</tbody>
</table>

6.21 The average density level will be applied to determine whether a cluster of adjacent planning applications (operational, permitted but not erected and live applications) can be described as ‘large wind farms’. Should adjacent turbines be categorised as a ‘large wind farm’ due to development density level, then their total electrical output will be calculated. If this calculation reveals that the total energy output exceeds 5MW the relevant proposals will be considered against the national planning guidance set out in TAN 8, which is referred to in 6.15 above.

Micro-generation – Permitted Development

6.22 From Monday the 18th June 2012 the Statutory Instrument ‘Town & Country Planning (General Permitted Development) (Amendment) (Wales) Order 2012 – Part 40 (Micro-generation)’ came into force. In relation to wind turbines it introduces new permitted development rights for householders wishing to install stand alone wind turbines (class H) (up to 11.1 metres in height) and temporary anemometer masts (class I) subject to certain conditions e.g. not in an AONB, Curtilage of a Listed Building, on a site designated as a Scheduled Monument etc. It is understood that this will be extended to non-domestic properties before the end of the year.
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7.0 Key Issues

7.1 This section highlights specific issues that should be considered with an application:

7.2 Infrastructure

7.2.1 Paragraph 2.9 and 2.10 of Annex C in TAN 8 refers to infrastructure serving wind turbines. These could include adequate road access, on-site tracks, turbine foundations, crane hard-standings, anemometer masts, construction compound, electrical cabling, electrical sub-station and control building.

7.2.2 The main issues to consider are:

i) Access Tracks – developers and their contractors, in consultation with the Council, will be required to produce a Traffic Management Plan where wind turbine developments will involve a significant increased load on public roads. These potential impacts will be less significant for individual wind turbines and micro turbines. Due to the size of the components being transported, there can also be issues in relation to the capacity of rural roads to cope with these loads. Developers should therefore, consult with Highway Department in respect of abnormal load deliveries to the development site.

ii) Electricity Connection Cables – Cable routes should be carefully chosen to avoid sensitive areas. Where power lines from the turbines cannot be located underground, careful consideration should be given to the visual impact of transmission lines and other associated infrastructure.

iii) Excavation including drainage works – consideration needs to be given to the impacts associated with the construction phase as well as the implications of any drainage works. The potential impact upon groundwater, ecology, topsoil removal, rate and quantity of rock to be excavated should all be considered.

iv) Control buildings, substations and external works – any proposed buildings and external works needed as part of the turbine development should be carefully sited to reduce their visual impact.

v) Traditional Landscape Features – Development should avoid the loss of important / historic hedgerows, stone walls / cloddiaw, protected and amenity trees and other traditional landscape features within the site boundary and for any off-site improvements to access or to serve the site.

7.2.3 Further guidance over access infrastructure matters are included in the checklist in Appendix 4, see sections 6 and 14.
7.2.4 Details over these matters will be required with any application and consideration will be given towards the potential impact of these in addition to the proposed turbine(s).

7.3 Noise

7.3.1 Technical Advice Note (TAN) 8: Renewable Energy (2005) states:

“...'The Assessment and Rating of Noise from Wind Farms’ (ETSU-R-97) describes a framework for the measurement of wind farm noise and gives indicative noise levels calculated to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to the costs and administrative burdens on wind farm developers or planning authorities. The report presents the findings of a cross-interest Noise Working Group and makes a series of recommendations that can be regarded as relevant guidance on good practice.”

Medium or Large Wind Turbines (above 20m) and Wind Farm Developments

7.3.2 For larger turbines and wind farm developments which fall within the requirement for an Environmental Impact Assessment, a full noise assessment will be required and ETSU-R-97 is generally accepted as the criteria to apply noise conditions (both overall and tonal) to such wind turbine development. However, before any assessment can be made the developer would be required to commission a series of background noise surveys at the most sensitive receptors around the site. Usually based upon L_{A90, 10m} the background noise measurements should be correlated against derived (not measured) 10 metre height wind speeds at the proposed wind farm site.

7.3.3 Most wind turbine manufacturers specify wind turbine emission levels based upon standardised 10 metre height wind speeds. However, wind speeds vary with height (wind shear) from site to site dependent upon ground conditions. Unless specific site wind shear is taken into effect there can be a significant mismatch between predicted and actual noise levels.

7.3.4 Although not covered in ETSU-R-97 we are advised that to overcome the above problem background noise levels should be correlated with derived (not measured) 10 metre height wind speeds, calculated by taking into account site specific wind shear. In order to do this, wind speed would need to be measured at two heights on site for the duration of the baseline noise survey. We are advised that one height must be no less than 60% of the proposed hub height and the remaining height between 40-50%. The standard roughness length 0.05 metres must be used to derive the 10 metre height wind speeds.

7.3.5 The Octave Band Prediction method of International Standard ISO9613-2 should be used in order to predict wind turbine noise emission levels, using warranted turbine sound power levels supported by test data and allowing for uncertainty. Atmospheric conditions of 10°C and 70% RH together with a ground factor of G=0.5 (with a 4 metre receptor height) should be assumed (the assumption of ‘soft’
APPENDIX 2

ground (G=1) should not be made). The barrier attenuation calculation using the method within ISO9613-2 should not be included within the predictions and generally no account should be taken of barrier attenuation by the landform unless there is no line-of-sight between the receptor and the highest point on the rotor.

7.3.6 Following the standard outlined in ETSU-R-97 and the additional supplementary details outlined above, the noise from the wind turbines shall not exceed an overall level of 35dB(A) or 5dB(A) (measured as $L_{A90, 10 \text{ min}}$) above the background, whichever the greater, up to wind speeds of 12m/s at 10m height. For the purpose of this document $LA90=LA_{eq} – 2\text{dB}$. An example of a planning condition based upon this assessment criteria is included in Appendix 1.

Small or Single Turbine Developments (up to 20m)

7.3.7 ETSU-R-97 offers a simplified method which could be considered appropriate for small or single turbine developments. The simplified method suggests that where noise can be limited to below 35dB $L_{A90, 10 \text{ m}}$ up to wind speeds of 10m/s at 10m height, then this condition alone would offer sufficient protection of amenity.

7.3.8 However, in reality, unless larger single turbines are located further than 400-500 metres from residential properties (not including those associated with the development), it is unlikely they would be able to comply with this simplified method and the full ETSU-R-97 methodology would need to be used instead.

7.3.9 The Local Authority will require the applicant to undertake noise tests, at his own expense, to demonstrate compliance with any noise condition, should a justifiable complaint of noise nuisance regarding the wind Turbine be received. The methodology used to determine compliance shall be agreed with the Environmental Health Section of the Local Authority."

Micro - Domestic Wind Turbines

7.3.10 Domestic wind turbines are turbines erected to supplement the electricity consumption of an individual house. The lower power output allows these turbines to have smaller blade diameters and shorter masts than larger models. In many instances this brings about significant noise reductions which can allow these turbines to be located closer to neighbouring properties than suggested above. It is recommended that the following guidance should be followed when considering installing such an appliance:-

- The site of the wind turbine should only be determined after the property has been professionally surveyed by the turbine manufacturer/installer.
- Applications will not normally be considered unless the specific turbine make and model is specified and is accompanied by the manufacturer’s information on predicted noise levels, supported by test data.
- In order to reduce the possibility of noise nuisance, turbines should be located away from boundaries and windows of other noise sensitive premises. It is worth remembering that a neighbour’s property could change hands and despite an agreement with the previous resident, the new
occupants are not prevented from making a complaint of noise nuisance to the Council.

- The turbine should be installed by a suitably qualified person, in accordance with the manufacturer's instructions and the site survey.
- The wind turbines shall be serviced in accordance with the manufacturer's recommendations.

7.3.11 In addition to the above, the following noise condition would also be applied to the development:

“The noise from the turbine shall not exceed the greater of 40bB L_{aeq \ (5 \ min)} or 5dB(A) above the L_{90} background noise 3.5m from the façade of any occupied neighbouring property not in the ownership of the applicant. Where the nearest part of any adjacent premises is above ground level, the monitoring location shall be 1m from the façade and a façade correction of -3dB(A) applied.”

Blade swish or Amplitude Modulation

7.3.12 The technical term for blade swish is Amplitude Modulation [AM] and the Document “Wind Farm Noise Statutory Nuisance Complaint Methodology” – produced by DEFRA in 2011 states:-

“Whilst all the causes are not known, it appears that AM tends to occur under certain meteorological conditions and the limited evidence available suggests this effect is likely to be manifest at a minority of wind farms. Moreover, it is a highly technical area, which despite research by numerous investigators over the last 20 years; there is to date no universally accepted explanation as to the causes of AM or means to predict its occurrence.”

7.3.13 The Planning Inspector in the Denbrook Inquiry (APP/Q1153/A/06/2017162) in 2009, adopted the following methodology for measuring Amplitude Modulation:-

“Amplitude modulation is the modulation of the level of broadband noise emitted by a turbine at blade passing frequency. These will be deemed greater than expected if the following characteristics apply:

a) A change in the measured LA_{eq,150\ milliseconds} turbine noise level of
b) more than 3 dB (represented as a rise and fall in sound energy levels each of more than 3 dB) occurring within a 2 second period.

c) The change identified in (a) above shall not occur less than 5 times in any d) one minute period provided the LA_{eq,1 \ minute} turbine sound energy level for that minute is not below 28 dB.

e) The changes identified in (a) and (b) above shall not occur for fewer than 6 minutes in any hour. Noise emissions at the complainant's dwelling shall be measured not further than 35m from the relevant building, and not closer than within 3.5m of any reflective building or surface, or within 1.2m of the ground.”

7.3.14 However, the DEFRA report has the following to say about this condition:-

“It is suggested that the above method, whilst not simple or easy to implement, may provide a starting point in trying to quantify AM by direct measurement, although it
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does not represent a validated method of assessing the significance of any impact or effect on amenity, and does not constitute a threshold for Statutory Nuisance.”

At the time of writing this Supplementary Planning Guidance, a Noise Working Group (formed under the direction of the Institute of Acoustics) was preparing to issues its final consultation document on a review of technical matters associated with wind turbine noise assessment. It is anticipated that this document will include discussion on amplitude modulation. Once published, developers are advised to contact the Environmental Health Section, for the Local Authority’s interpretation of this guidance.

**Tonality**

7.3.15 The Isle of Anglesey County Council discourages the use of turbines which have been identified as tonal. The Local Authority will consider noise reports conducted using either the “BWEA Small Wind Turbine performance and Safety Standard (Feb 2008)” or BS EN 61400-11:2003 “Wind turbine generator systems – Part 11: Acoustic noise measurement techniques” as appropriate assessments of turbine tonality. However, the planning condition example contained in Appendix 2 is based upon the method outlined in ETSU-R-97.

**Cumulative Noise Impact**

7.3.16 It is possible that the siting of additional wind turbines near to existing sites could increase in noise levels to nearby properties. ETSU-R-97 refers to the issue of cumulative impact as follows:-

“The Noise working group is of the opinion that absolute noise limits and margins above background should relate to the cumulative effect of all wind turbines in the area which contribute to the noise received at the properties in question. It is clearly unreasonable to suggest that, because a wind farm was constructed in the vicinity in the past which resulted in increased noise levels at some properties, the residents of those properties are now able to tolerate still higher noise levels. The existing wind farm should not be considered as part of the prevailing background noise.”

7.3.17 Where it is proposed to erect a wind turbine within or close to the zone of predicted noise influence of another turbine, wind farm or a group of wind farms, a cumulative noise assessment should be undertaken. The boundary of the "Zone of Predicted Noise Influence" shall equate to the 35dB LA90 contour based upon a wind speed of 10m/s at 10m height. The Applicant shall consult with the Local Authority on the precise interpretation and location of this contour.

7.3.18 The cumulative noise assessment will need to demonstrate that the combined noise level from all wind turbine/s will not exceed an overall level of 35dB(A) or 5dB(A) above background up to wind speeds of 12m/s at 10m height. The background noise levels and noise assessment shall adopt the same methodology as outlined in that for "Larger turbines and wind farm developments" mentioned.
above and the applicant shall make every endeavour to ensure that the quiet day-
time and night-time periods, used for the background noise assessment, are not
influenced by any nearby wind turbines.

7.4 Safety

7.4.1 Paragraph 2.20 of TAN 8 states that the minimum desirable distance from a turbine
and occupied buildings will usually be greater than that required to meet safety
requirements.

7.4.2 Information will be required with an application that shows regard has been given
over the position of any proposed turbine in relation to the proximity of any
surrounding development and the risk of injury to humans through catastrophic
equipment failure or ice throw and possible effects of visual distraction to road
safety. Section 6 of the checklist in Appendix 4 deals with this matter.

7.5 Landscape & Visual Impact

7.5.1 This is a key consideration for proposals for wind turbines on Ynys Môn due to the
high value of the environment reflected in the number of designations on the Island
which include the AONB, Conservation Areas, Scheduled Ancient Monuments,
Listed Buildings, Heritage Coast, Historic Landscapes/Gardens and World Heritage
Site.

7.5.2 The level of LVIA required will depend on the proposal, its location, and proximity to
sensitive receptors. Guidance is provided within section 11 of the checklist
contained in Appendix 4 over the level of detail required with different types of
applications.

7.5.3 Tools such as LANDMAP, developed by the Countryside Council for Wales, should
be used to assist in assessing the visual impacts of wind turbines and their
associated infrastructure such as access roads and grid connections. LANDMAP,
the Welsh approach to landscape assessment, is a GIS (Geographical Information
System) based landscape resource where landscape characteristics, qualities and
influences on the landscapes are recorded and evaluated into a nationally
consistent data set. The following link takes you to the LANMAP page on CCW’s
web-site:  http://www.ccw.gov.uk/landmap

7.5.4 The Isle of Anglesey County Council’s ‘Landscape Strategy Update (2011)’ has
been produced using LANDMAP. The applicable character area(s) must be
referred to in the assessment of new schemes. A copy can be viewed at:
http://www.anglesey.gov.uk/planning-and-waste/planning-policy/landscape-
strategy?tab=downloads

7.5.5 ‘Guidelines for Landscape and Visual Impact Assessment’ by the Landscape
Institute and the Institute of Environmental Assessment 2nd edition and the
Countryside Council for Wales document ‘LANDMAP Information Guidance Note 3:
Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind
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Turbines’ also provide useful information. These must be used in the preparation of LVIAs for medium to large turbines. The methodology can be adapted as appropriate for micro and small turbine proposals.

7.5.6 Please see Appendix 3 - ‘LANDMAP 2011 Overall Landscape Evaluation for maps on the following themes: Visual and Sensory, Cultural Landscapes, Historic Landscapes, Geological Landscapes and Landscape Habitats.

7.5.7 In accordance with National and Local Planning Policies (PPW para 12.9.9, TAN 8 para 2.12, policy 30 Ynys Môn Local Plan and policy EN2 stopped UDP) Medium and Large wind turbines within the AONB will not be supported. Micro and small scale developments (up to 20m to tip height) will only be supported if they demonstrate they conserve and enhance the natural beauty of the AONB.

7.5.8 Outside the AONB no turbine proposal should cause significant harm to the setting of the designated landscape or National Park. A LVIA will need to be carried out to show any potential impact of a scheme to ensure no significant harm will occur as a result of the proposal.

7.5.9 The figure of 20m to blade tip is a maximum and should not be viewed as a target for turbines at these locations. Applications within this parameter having an unacceptable impact will be refused. Proposals will be evaluated against the relevant issues highlighted within this SPG, including the cumulative impact upon the AONB.

7.5.10 In the majority of cases a LVIA will be required, applicants should contact the Built Environment and Landscape Section of the Council to establish and agree the extent of the assessment including choice of viewpoints. The ZTV is to be agreed at the outset and follow the recommended distances within section 11 of the checklist in Appendix 4.

7.6 Cumulative Landscape and Visual Impacts

7.6.1 The inter-relationship between individual turbines can have a key impact on the landscape. It can lead to massing and the visual impression of a concentration of wind farms / turbines even when they are in fact distant from each other. This is known as cumulative impact, which is a material consideration in decision-making.

7.6.2 Cumulative impact is becoming increasingly relevant to the assessment of wind turbine developments as more applications come forward. This phenomenon can arise where there is existing wind energy development and an extension is proposed to that development or where there are proposals for other wind energy developments within the same area. Cumulative impacts may or may not be adverse, depending on the proposals and the landscape setting in question. The capacity of the landscape to accept each turbine and the cumulative effect of a group of turbines must therefore be evaluated.

7.6.3 The degree of cumulative impact is a product of the number of and distance between individual windfarms / turbines, the inter-relationship between their Zones of Visual Influence (ZVI), the overall character of the landscape and its sensitivity to
windfarms / turbines, the relationship with other built structures and the siting and design of the windfarms / turbines themselves. It is important to recognise that cumulative impact effects upon visual amenity as well as the landscape.

7.6.4 Cumulative effects on visual amenity consist of combined visibility and sequential effects.

- Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. When considering the cumulative effects arising from combined visibility, it is necessary to consider, for each of the viewpoints within the ZVI of the windfarm / turbines concerned, the combined effect of all windfarms / turbines which are (or would be) visible from these viewpoints. Combined visibility may either be in combination (where several windfarms / turbines are within the observer’s arc of vision at the same time) or in succession (where the observer has to turn to see the various windfarms /turbines).

- Sequential effects occur when the observer has to move to another viewpoint to see different developments. Sequential effects should be assessed for travel along regularly-used routes like major roads or popular paths.

7.6.5 The occurrence of sequential effects may range from frequently sequential (the features appear regularly and with short time lapses between, depending on speed of travel and distance between the viewpoints) to occasionally sequential (long time lapses between appearances, because the observer is moving very slowly and / or the there are large distances between the viewpoints.)

7.6.6 Cumulative visual effects will vary in degree with

- the number and sensitivity of visual receptors;
- the duration, frequency and nature of combined and sequential views (glimpses or more prolonged views; oblique, filtered or more direct views; time separation between sequential views);
- the relative impact of each individual windfarm / turbine, with regard to visual amenity; and
- the presence of other built structures.

7.6.7 Cumulative landscape impacts affect the physical fabric or character of the landscape, or any special values attached to the landscape.

- Cumulative effects on the physical fabric of the landscape arise when two or more developments affect landscape components such as woodlands and hedgerows. Although this may not significantly affect the landscape character, the cumulative effect on these components may be significant.

- Cumulative effects on landscape character can arise from two or more wind turbine or windfarm developments as well as existing infrastructure such as electric pylons or masts. Wind turbine or windfarm developments introduce new features into the landscape. In this way, a change in the landscape character can create a different landscape character type, in a similar way to large scale afforestation. That change may be adverse to the character of a specific landscape; in some instances the change may not be adverse; some derelict or
industrialised landscapes may be enhanced as a result of such a change in landscape character. The cumulative effects on landscape character may include other changes, for example trends or pressures for change over long time periods, which should form part of any consideration of a particular project.

7.6.8 There are general points that should be considered when assessing the significance of cumulative landscape effects. These are the effects on landscape designations, designed landscapes, landscape character, sense of scale, sense of distance, existing focal points in the landscape, sky lining, sense of remoteness or wilderness and other special landscape interests.

7.6.9 The landscape and visual effects of wind turbines will vary on a case by case basis according to the type of wind turbine (model and height), its location, the landscape setting of the proposed development and impacts on sensitive areas and/or receptors. Cumulative impact should take into account existing windfarms / turbines, those which have permission but have not been erected and those that are the subject of valid but undetermined applications.

7.6.10 The potential cumulative effects upon sensitive receptors of adjacent local authorities should also be considered.

7.6.11 In an area where the cumulative impacts of wind turbines are considered to be significant a Landscape and Visual Impact Assessment is likely to be required. Section 11 of the checklist in Appendix 4 gives further information of what is required as part of a Landscape and Visual Impact Assessment. The Council maintains an up to date list of all submitted wind energy applications.

7.6.12 As part of the LVIA procedure for wind turbine applications, developers will need to obtain a list of existing, permitted, live and imminent applications. For guidance purposes it is recommended that for small turbines the cumulative LVIA should consider applications up to 5km maximum whilst for medium to large between 15 to 30Km.

7.7 Ecology and Ornithology

7.7.1 The main ecological impacts resulting from wind turbines are associated with the site infrastructure. This includes direct and indirect impacts of wind turbine construction on ecological features e.g. habitat loss; and direct and indirect impacts of wind turbine operation on ecological receptors e.g. bat and bird strikes.

7.7.2 All proposals will be assessed for their impact on biodiversity, including protected species, ornithology and habitats. Site-specific assessments will be required to identify the biodiversity risks together with any on-site mitigations or off-site compensatory measures.

7.7.3 An ecological survey and assessment will be required for proposals that are likely to have a significant effect on local, national or international wildlife and nature conservation. Although this will often be in close proximity to designated sites, because of the different features of sites, a number of which are notified for their
species and bird interest, impacts on site features can be experienced some
distance away from the designated site.

7.7.4 In particular, a survey may be required if an application is near to a site of known
importance for bats and birds, or if a site is proposed within 50 metres from relevant
habitat features that offer foraging/ commuting/ roosting opportunities. In order to
minimise the impact on wildlife, it is advisable that turbines should be a minimum of
50 metres away from these types of habitat features. Applicants may contact the
Council’s Ecological and Environmental Adviser for advice, at the pre-screening
stage. Early consultations with the Countryside Council for Wales and RSPB
should also be undertaken. The Anglesey Local Biodiversity Action Plan may be
referred to for background biodiversity context on the Island.

7.7.5 A habitat survey and impact assessment under the requirements of the
Conservation (Natural Habitat, etc.) Regulations 1994 may be required for
proposals affecting sites designated for nature conservation (e.g. SPA, SAC, SSSI
and candidate Wildlife Sites) or because the proposed site contains priority habitats
(those listed by the Welsh Government under section 42 of the NERC Act 2006). A
habitat survey should cover: the site of the turbine, the access tracks, maintenance
tracks and any habitat removal for road widening to allow for delivery to the site.
The habitat survey should be a Phase 1 habitat survey.

7.7.6 Where possible, developers should mitigate for any potential ecological damage.
This could include restoration of habitat edges adjacent to infrastructure, covering
excavation works, protecting watercourses and micrositing of turbines within the
development to help avoid areas of high flight activity. Relevant guidance is
provided in section 12 of the checklist in Appendix 4 over ecological issues.

7.8 Archaeology

7.8.1 Wind turbines can have a significant impact on archaeological features. This can
include the loss or direct impact of identified features, or indirect impacts on the
character or appearance and setting of features.

7.8.2 Sufficient distance needs to be given between turbines and archaeological features
to ensure that the possibility of damage is minimised such as in the case of
potential damage or destruction from collapse of the supporting tower or a sheared
turbine blade. Where archaeological features are or may be present, an
assessment may need to be undertaken prior and during the construction phase to
ensure no below ground archaeological features are damaged or destroyed and
any undiscovered archaeology is appropriately recorded.

7.8.3 Where nationally important archaeological remains (whether scheduled or not) and
their settings are likely to be affected by a wind turbine development, there should
be a presumption in favour of their physical preservation in situ. In cases of lesser
archaeological remains, the Local Planning Authority will need to determine the
relative importance of the archaeological feature against the benefits and need of
the proposed development. Guidance is provided in section 13 of the checklist in
Appendix 4 about heritage evaluation issues.
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7.9 Proximity

7.9.1 This section deals with proximity of proposed turbines to highways and railways, power lines, aviation, housing, tourism sites and other sensitive receptors.

7.9.2 Anglesey is a predominantly rural area with a dispersed pattern of development. Due to the fact that few areas are far from existing settlements or individual dwellings, the amenity impacts of wind development are likely to be significant in many parts of the area.

7.9.3 It is important to distinguish between impacts on residential amenity and other impacts arising from wind proposals such as landscape and wider visual safety issues. Separation distances can be used to minimise impacts.

7.9.4 Separation is clearly required for residential amenity even though private views are not legally protected. There is limited guidance regarding separation distances between wind turbines and settlements or individual dwellings or caravans. However, with wind energy proposals, it is recognised that, due to the scale of the turbines and movement of the blades there is the potential for these structures to have an unacceptable impact upon residential visual amenity.

7.9.5 The strategic exercise for assessing potential SSAs for large scale, over 25MW onshore wind developments, used a buffer of 500 metres from residential properties. In the ‘Best Practice Guidance – Renewable Energy – A Toolkit for Planners’ again a buffer of 500 metres around existing dwellings is advocated (for a 2MW machine).

7.9.6 To protect the amenity of residential properties Medium and Large turbines (over 20m to tip height), as defined in paragraph 6.6, should not normally be located within 500m of residential properties or tourism sites, other than those associated with the development. The exception to this would be where all properties within this 500m buffer support the proposal or other significant material considerations are found to be in favour of the proposal e.g. a community led scheme.

7.9.7 Such a separation distance should be viewed as a general guideline and the exact distance will depend on scientific locational circumstances such as the height of turbine(s), orientation of views, topography, other buildings and land cover. The effect on living conditions and amenity of people in houses is a material consideration and a judgement will have to be made as to whether the effect would be one of unacceptable dominance or overbearing. As such each proposal will be considered on a case by case basis.

7.9.8 In certain cases the Local Planning Authority will require a Residential Amenity Assessment to evaluate the potential impact of a development on adjoining occupied buildings.

7.9.9 TAN8 advises that all turbines should be set back a minimum distance, equivalent to the height of the blade tip from the edge of any public highway or railway line.
7.9.10 National planning policy states that wind turbines should be separated from overhead power lines in accordance with the Electricity Council Standard 44-8 “Overhead Line Clearances”.

7.9.11 In terms of the proximity to aviation interests, developments within a specified radius of major airports and aerodromes are subject to consultation with the Civil Aviation Authority (CAA), the Ministry of Defence (MoD) and the National Air Traffic Services. Section 7-5.0 of the SPG refers to protected areas including Aircraft and Aerodromes.

7.9.12 In terms of tourism, all proposals will be assessed for their impact on the interests of tourism and recreation. Developers should identify any significant adverse affects on tourism and recreational interests and on the underlying factors which contribute to the appeal of such destinations to visitors and recreational users. Tourism is an important element of the local economy and therefore any detrimental impacts on this economic sector resulting from wind energy developments should be minimised. In assessing proposals the relative scale of existing recreation and tourism facilities in the area should be taken into account. Further guidance is provided in part of section 17 of the checklist in Appendix 4.

7.10 Electromagnetic Production and Interference

7.10.1 Wind turbines can interfere with electromagnetic transmissions by emitting an electromagnetic signal itself, interfering with electromagnetic signals. This includes television, radio and micro wave links and systems used by the police and emergency services. These interference effects can be reduced through changes to turbine siting and consultation with operators. Provided careful attention is paid to siting, wind turbines should not cause any significant adverse effects on communication systems which use electromagnetic waves as the transmission medium (e.g. television, radio and microwave links). Typically a 100m clearance either side of a line of sight link from the swept area of turbine blades is required, though individual consultations would be necessary to identify each organisation’s safeguarding distance. Early consultation should be sought with the Office of Communications (OFCOM), who hold a central register of all civil radio communications operators in the UK and acts as a central point of contact for identifying specific consultees relevant to a site.

7.10.2 It is often possible to mitigate impacts by careful siting of individual turbines within a site so that turbine blades avoid a buffer zone, typically 100m either side of the signal path.

7.10.3 Further guidance regarding Electro magnetic assessment is provided in section 15 of the checklist in Appendix 4.

7.11 Shadow Flicker and Reflected Light
7.11.1 Shadow flicker is the strobe effect of light flashing through the moving blades casting a moving shadow over nearby properties within 130° either side of north. Shadow flicker can cause a disturbance for affected residents of nearby properties and can have potentially harmful impacts on sufferers of photo-sensitive epilepsy.

7.11.2 The likelihood of shadow flicker occurring and its severity depends on:

- The direction of the dwelling relative to the turbine(s);
- The distance from the turbine(s);
- The turbine height;
- The time of year (the effect is greater when the sun is brightest);
- The proportion of daylight hours in which the turbine(s) operate;
- The frequency of bright sunshine and cloudless skies (particularly at low elevations above the horizon);
- The prevailing wind speed and direction.

7.11.3 Based on an analysis of appeal decisions, to avoid shadow flicker a separation distance of 10 rotor diameters between the wind turbines and the nearest dwelling should be adequate in most cases, although the local topography and the position of the turbine in relation to the dwelling(s) should be taken into consideration during any assessment. It has also been proven that within this 10 rotor diameter, shadow flicker will only occur in some conditions for some of the time and will only affect nearby properties within 130° either side of north.

7.11.4 Within this 10 rotor diameter distance, investigations should be undertaken by the applicant to identify any properties likely to be affected by shadow flicker. The results of the assessment should be presented with the planning application. If unacceptable shadow flicker impacts are established, mitigation measures should be taken including moving the position of the turbine, using technology to stop turbines during episodes of shadow flicker, or, as a last resort, using tree planting and fitting window blinds to ameliorate the effect.

7.11.5 Turbines can also cause flashes of reflected light, which can be visible for some distance. It is possible to ameliorate the flashing but it is not possible to eliminate it. Careful choice of blade colour and surface finish can help reduce the effect.

7.11.6 Further guidance regarding the assessment of shadow flicker is provided in section 8 of the checklist in Appendix 4.

7.12 Groundwater and surface water

7.12.1 Wind energy developments tend to have little or no effect on water resources or the water environment once they are operational. However, the construction and decommissioning of wind turbines, either individually or as larger groups, can have potential impacts on local watercourses, water bodies, groundwater and water supplies due to pollution, erosion, sedimentation and impediments to flow resulting from construction activity. The effects of developments during the construction phase needs to be carefully considered and monitored, in order to avoid pollution of watercourses and avoid adverse impacts on groundwater and the ecological status.
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of water bodies. In such cases, details of mitigation measures may need to be submitted with a full application.

7.12.2 An assessment of the risks to water quality will be required for each medium to large scale wind energy developments and the Environment Agency will be consulted where appropriate. In addition, any potential adverse impact from any change to the hydrological regime on statutory designation should be assessed. The preparation of an Environmental Management Plan prior to construction / decommissioning can mitigate any potential risk to ground and surface water.

7.13 Community Engagement

7.13.1 Developers, in consultation with the local planning authority, should take an active role in engaging with the local community on wind energy proposals. This should include pre-application discussion and provision of background information on the renewable energy technology that is proposed.

7.13.2 Early engagement with the local community at the pre-application stage can result in a better understanding of a scheme and its benefits. Applicants should engage with members of the public as well as Town and Community Councils.

7.13.3 Applications will need to be supported by a community engagement statement setting out how the applicant has carried out pre-application consultation. Applicants should provide evidence of the methods used e.g. public meetings, exhibitions, surveys, leaflets. Applications should demonstrate that they have notified those who would be affected by the proposal i.e. close neighbours. Applicants should also demonstrate that they have consulted local recreational groups such as orienteering clubs, ramblers and hand-gliding clubs, where possible. Section 10 of the checklist in Appendix 4 provides further information of what is required in the community engagement statement.

7.14 Minerals

7.14.1 Sites containing valuable mineral resources should not be sterilised by inappropriate development. Where a proposal is situated near to such a site details of mitigation measures, which should be discussed with the North Wales Shared Service for Minerals and Waste, may need to be submitted with an application.

7.14.2 Appendix 9 in the stopped Ynys Môn Unitary Development Plan identifies mineral sites and a 400m buffer around these sites.

7.15 Limited Planning Consent

7.15.1 Section 91 of the Town and Country Planning Act 1990 provides local planning authorities with a means of limiting the life of a planning consent in specific circumstances. It is considered that the need to consider the cumulative impact, in terms of noise, visual and energy output, of wind turbine / wind farm proposals in a location justify the use of a condition to restrict the duration of the permission. The assessment of cumulative impact would take into account existing erected
schemes, those permitted but not implemented and all full applications submitted prior to a specific scheme being evaluated. If there is a genuine need for the development, i.e. the scheme isn’t a speculative one, it is argued that the turbine(s) will be built soon after it is approved. The early development of sites will also assist towards achieving national targets for energy from renewable sources.

7.15.2 The limited planning consent period should still allow sufficient time for the developer to discharge any conditions and sort out matters to progress the development e.g. finance.

7.15.3 In light of this permissions granted for wind turbine / wind farm proposals will normally only be granted planning permission for a period of 2 years to ensure that the development is implemented within a suitable timeframe. Consideration will be given to longer period subject to the Local Planning Authority being satisfied that there are justifiable reasons for this.
8.0 Siting and Design

8.1 The siting and design of wind turbines are important considerations and will be based on a number of factors including access, wind speed, and grid connection. A number of factors associated with turbines such as the size, colour and their distribution will all play their part in determining whether the development appears to recede into or stand out from the landscape.

8.2 All wind turbine proposals will be assessed for their impact on the landscape and visual amenity in relation to their design in terms of siting, impact on landscape character, turbine type, colour, spacing and ancillary infrastructure.

8.3 Location and Siting

8.3.1 Wind turbines should be carefully sited and consideration should be given to the following landscape issues:

- How turbines relate to the visual horizon;
- The sensitivity of the locations from which they are visible;
- The impact on the amenity of the surrounding area taking the area’s historic, cultural and recreational significance into consideration;
- The existing features in the landscape.

8.3.2 Section 6 of the checklist in Appendix 4 identifies the information required with all applications with respect to the location of proposals for wind turbines.

8.4 Layout and landscape character

8.4.1 Proposals for wind turbines should take account of the overall landscape context and character of the area in terms of its general appearance, pattern of land cover, openness / closure, character of vertical elements and existing landscape features. Alternative layouts should be explored in relation to the most sensitive viewpoints.

8.5 Turbine form and design

8.5.1 Technological advances have led to a wide range of wind turbines. These different models provide different options in terms of size, proportions of turbine tower to blade length and rotation speeds. The height and design of turbines should be in scale with the locality and the suitability of a particular design will depend on the landscape sensitivity of the area.

8.6 Turbine Colour

8.6.1 The colour of wind turbines is also an important consideration when assessing the potential impact of such developments. It is important to choose a colour that relates positively to the immediate landscape backdrop against which the turbines will be viewed. A matt finish is considered to be essential.
8.7 Turbine Spacing

8.7.1 Wind turbines need to be positioned so that the distance between them is around 3-10 rotor diameters (this would equate to 180-600 metres for a development using 60m diameter rotors, 1.3MW turbines) (example taken from TAN8).

8.8 Ancillary infrastructure

8.8.1 In addition to wind turbines, the required infrastructure of a wind farm may include adequate road access, on-site tracks, turbine foundations, crane hard-standings, anemometer masts, a construction compound, electrical cabling and an electricity sub-station and control building. Consideration should be given to the following issues when considering the location and siting of ancillary development. See section 7.2 of this SPG over detailed consideration required for ancillary infrastructure.

8.8.2 With any ancillary buildings required on site, given the rural nature of the majority of locations for turbines, such buildings should be agricultural in appearance either modern or traditional dependent upon the character of a specific location.
9. **Decommissioning and Reinstating Land**

9.1 Paragraph 6.4 of TAN 8 states that Local Planning Authorities should consider appropriate conditions for the decommissioning of wind turbines and the restoration of affected land. In addition, operators may be required to ensure that sufficient finance is set aside to enable them to meet full restoration obligations.

9.2 A suitable mechanism may be required, e.g. a bond, in order to ensure that sufficient resources would be available for dismantling and remediation. This is to ensure adequate measures are in place to ensure the site is restored in an appropriate manner.

9.3 Full restoration requires the removal of turbines, ancillary structures and tracks and the restoration of appropriate vegetation. In certain cases the removal of tracks could lead to more damage than leaving them in situ. Subject to the satisfaction of the Local Planning Authority over visual impact of such tracks and the impact over their removal there may be instances where their removal of tracks will not be required.
10.0 Repowering

10.1 There may be occasions when existing, older wind turbines need to be replaced by more efficient modern ones and this should be encouraged provided that the environmental and landscape impacts are acceptable. A screening opinion may be required to assess whether an Environmental Impact Assessment will be necessary to accompany a new application.

10.2 TAN 8 in paragraph 2.13 states that support would be given to local planning authorities that restrict almost all wind energy developments larger than 5MW to within Strategic Search Areas (SSAs) other than for schemes on urban / industrial brownfield sites of up to 25MW. The exception to this rule is the repowering and/or extension to existing windfarms (paragraph 2.14 TAN8).

10.3 In light of the fact that Ynys Môn has not been recognised as a SSA and that schemes on urban / industrial brownfield sites are encouraged up to 25MW any repowering proposal involving an existing wind farm on Ynys Môn should be limited to a maximum of 25MW. Any such proposal would also be expected to satisfy the other assessment requirements contained within this SPG.

10.4 Any such repowering proposal of an existing wind farm should have regard to providing an improved layout to lessen potential visual impact from sensitive receptors. It is likely that a LVIA will be required for all repowering proposals.