

**NOTE:**

**Landscape and Landscape Character Assessment for County Galway**

The Landscape and Landscape Character Assessment for County Galway was not amended and was carried forward as a supporting document to the County Development Plan 2009-2016.





## Landscape and Landscape Character Assessment for County Galway

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## Landscape and Landscape Character Assessment for County Galway

### 1. Introduction

**1.1** The aim of this study is to provide a source of information on landscape issues which may be used in the creation of planning policies relating to proposed development such as residential dwellings, commercial and industrial buildings, forestry and wind farms within the County of Galway.

**1.2** The study was carried out between September 2001 and Jan 2002 and comprises desktop studies, backed up by fieldwork and mapped using Geographical Information System Techniques (MapInfo). The components of this study comprise detailed landscape assessment, desktop forestry study and a desktop wind farm study.

#### Landscape

**1.3** This landscape assessment was carried out according to the Draft Planning Guidelines on Landscape and Landscape Assessment issued by the Department of the Environment and Local Government.

#### Forestry

**1.4** Information on forestry for this project was reviewed from the following sources:

- Department for the Environment 1996, '*Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland*';
- Forest Service 2000, '*Forestry and the Landscape Guidelines*';
- United Nations Conference on Environment and Development 1992;
- Ministerial Conferences on the Protection of Forests in Europe in Helsinki (1993) and Lisbon (1998); and
- Ordnance Survey maps.

## National policy background

**1.5** Ireland has one of the lowest proportions of land devoted to forestry of all the EU nations. The most important current national policy statement on forestry in Ireland is the Government document 'Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland' 1996. This sets a national target for forestry cover of 17% by 2030 (currently 9.43% nationally (2000 figures)). An integral component of current policy is the concept of sustainable forest management, based on principles set out at United Nations Conference on Environment and Development 1992 and the Ministerial Conferences on the Protection of Forests in Europe in Helsinki (1993) and Lisbon (1998). The Lisbon Conference set out six criteria with which to monitor forest management (including forest planting) and these have been embodied into the 'Irish National Forestry Standard' 2000 as follows:

- Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles
- Maintenance of forest ecosystem health and vitality
- Maintenance and encouragement of productive functions of forests (wood and non-wood)
- Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems
- Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water)
- Maintenance of other socio-economic and cultural functions and conditions

**1.6** Associated indicators to the criteria have been derived in order to monitor performance. Criteria 3, 4, & 6 have associated indicators related to the landscape and recreational values of forestry. **1.7** The Forest Service, Department of the Marine and Natural Resources is the regulatory authority for forestry. Most forest establishment is grant aided. To qualify for grants, strict adherence to environmental guidelines and operational standards set by the Forest Service is required. **1.8** The forestry sector can broadly be categorised as comprising:

- Commercial forests in which market conditions govern the management of forests and the processing of forest produce.
- Commercial forests in which management for timber production is constrained by statutory environmental requirements.
- Conservation forests which are State managed or regulated.

**1.9** State forests are established and maintained by Coillte who own about 70% of the forest estate. Duchas the Heritage Service manage certain native and semi-natural forests.

**1.10** Currently planning permission and an EIA is required for initial afforestation above a threshold of 50 hectares or cumulative afforestation (i.e. within 500 metres) planted by or on behalf of a single developer over a three year period which results in a total planted area exceeding 50 hectares, and the replacement of broadleaf high forest with conifers above 10 hectares. In addition grant applications for projects of over 25

hectares are referred for consultation to local authorities.

## **Galway context**

**1.11** The current forest cover of Galway is 8.97% (2000 figures) amounting to a total of 53,000 hectares. Of this, 38,300 hectares is state owned and 15,000 hectares privately owned. The majority of the planting undertaken in recent years in the county has been coniferous:

- 2000 figures 38 ha. Broadleaf; 599 ha. Coniferous
- 1999 figures 23 ha. Broadleaf; 423 ha. Coniferous

**1.12** In order to assist in achieving the national target, the current area of forestry cover in Galway will need to be doubled by 2030.

## **Wind farms**

**1.13** The assessment of the suitability of the landscape character areas for development of wind energy sites is only indicative and the results presented are based on the character area sensitivity ratings and a very limited amount of wind speed data. The assessment has highlighted the shortfalls in relevant information and more significantly the need to develop guidelines for the Wind Energy Sites in Galway.

**1.14** Wind farm input to the landscape character assessment was addressed under the following 4 headings: existing wind farms, environmental context including visual impact, infrastructure and wind resource.

**1.15** In order to provide outline recommendation on the location of wind farms within the landscape of Galway information was taken from the following sources:

- National Sustainable Development Strategy (1997);
- National development Plan (2000);
- Strategy for Intensifying Wind Energy Development;
- Department of Environment and local Government Guidelines on Wind Farms;
- EU Best Practice Guidelines for Wind Energy Development;
- Irish Peatland Conservation Council, Bogs and Fens of Ireland Conservation Plan 2005-Campaign Action;
- Seminar: Energy from Fresh Air, Planning for Irish Wind Energy;
- Results of Altner Project, Cork County Council;
- Data from Irish wind farmers co-operative Society Ltd.;
- Liaison with Irish Energy Centre , Renewable Energy Information Office; and
- Liaison with Galway Energy Agency Ltd.







## Landscape and Landscape Character Assessment for County Galway

### 2. Results of Assessment

#### Landscape

2.1 Landscape character areas were defined by a combination of professional judgement relating to the physical elements which make up the landscape of an area and the following procedures from the prescribed landscape assessment methodology:

- Physical units i.e. the combination of land form and land cover comprising:-
- Visual units i.e. physical limits of a view and
- Image units i.e. physical features such as focal points

#### Landscape Character areas

2.2 25 character areas were identified, a description of each area is as follows and shown on Figure 1:

2.3 **Area 1-North east Galway (Balinasloe to Ballymoe).** Landscape is flat to undulating open pastoral land bound by field hedgerows, with small scattered coniferous plantations of 1-6 km<sup>2</sup> in size. There are no areas of particular scenic value. This area is primarily rural and includes the settlements of Ballinasloe, Mountbellew Bridge, Glennamaddy, Ballymoe and Dumore. (Ref Plate 1)

2.4 **Area 2-Shannon and Suck River Valley between Portumna and Ballinasloe.** The landscape of the river valley is flat bordered by deciduous trees and wateredge planting. Also along the riverbank are recreational facilities for fishing, bird watching and boating. There are local scenic views along the river and to the local heritage sites. Long distant views are to the Aughty Mountains.

2.5 **Area 3-East central Galway (Athenry, Ballinasloe to Portumna).** The landscape is flat, coarse grassland, occasional clumps of coniferous forestry between 1-3 km<sup>2</sup> in size, fields defined principally by stone walls. There are no areas of particular scenic value although the stone walls are quite distinct. (Ref Plate 2)

2.6 **Area 4-Southeast Galway. (Clarinbridge to Gort)** The landscape is undulating scrubby grassland, bound by field hedgerows without mature trees. The

landscape is scenic without being remarkable and there are long distance views of the Slieve Aughty Mountains to the east.(Ref Plates 3 and 23)

2.7 **Area 5-Northeast Galway (Tuam environs).** Landscape is flat, fertile pastoral land bound with field hedgerows. There is little or no coniferous forestry or deciduous woodland. There are no areas of particular scenic value.

2.8 **Area 6-Slieve Aughty Mountains.** The landscape is mountainous with areas of both coniferous and deciduous woodland. The landscape is wild, natural and scenic. Long distant glimpse views are available through the trees towards the lower ground in the surrounding areas.

2.9 **Area 7-Northwest Lough Derg.** This is an enclosed, intimate landscape surrounding the northwestern portion of the Lough. The northern and western water edge within County Galway includes many recreational facilities including forest walks, golf, access to heritage sites and picnic areas. The area is scenic and semi natural. (Ref Plate 4)

2.10 **Area 8-Lower Burren (Co. Galway portion).** The landscape is flat to undulating, with poor quality grassland around an abundance of stones and large rocks. The land is open with no hedgerows or trees or built elements and is quite barren yet scenic in a wild natural sense. (Ref Plate 5)

2.11 **Area 9-Inveran to Galway City coastline.** The coast is flat, comprising rocks and sand merging with natural grassland towards the R336. The coast line commands striking views of County Clare and the Aran Islands. Further inland from the R336 route, there are residential and some light industrial developments which have lowered the scenic value in this area.

2.12 **Area 10-East Connemara Mountains (Moycullen, Recess to Glinsk)** The landscape is largely mountainous with slopes covered with coniferous forestry. The lower areas comprise rocky outcrops and areas of rough grassland around the many small loughs and turloughs. The landscape is scenic although not remarkable. (Ref Plates 6 and 8).

2.13 **Area 11-Lough Corrib and environs.** Lough Corrib is a wide, dramatic expanse of water including many islands supporting deciduous woodland. The land around the northern part of the Lough is undulating heath, bog and coniferous forestry where as the land surrounding the southern section is flat, open grassland. The landscape of the Lough and its surrounds is highly scenic and includes many facilities for visitors. (Ref Plate 7)

2.14 **Area 12-South foothills of east Connemara Mountains.** The landscape of the foothills is undulating heath and scrubland with regular rocky outcrops. The area is generally undeveloped and has expansive views in a southerly direction across Galway Bay towards County Clare (Ref. Plate 9).

2.15 **Area 13-East Galway Bay (Oranmore to Kinvarra Bay and inland to N18 road).** The coastline is intimate and sinuous with many sheltered inlets. The coast is scenic and relatively undeveloped. The landscape adjacent to the coast comprises pastureland in large fields bordered by mature hedgerows. The existing vegetation

screens the coastline from roads and properties inland of the N18 road.(Ref Plate 10)

2.16 **Area 14-West Connemara.** The landscape is flat low lying bog and heath with many scattered lakes and turloughs. There is very little development and the landscape is atmospheric and quite distinct although not highly scenic. (Ref Plate 11)

2.17 **Area 15-Lettermore and Gorumna Islands.** The landscape is flat, open, rough grass and scrub with frequent rocky outcrops. There are many small scale residential and community developments within this area most with south and west facing views towards Galway Bay. The landscape is developed yet not spoilt and the overall setting of the low-lying islands and the sea is quite scenic. (Ref Plates 12 and 13)

2.18 **Area 16-West foothills of east Connemara Mountains. (Glenicmurrin Lough environs).** This landscape is flat to undulating, open with little vegetation and comprises lakes and bog land. There is very little development in this area yet it is not of high scenic value. (Ref Plate 15)

2.19 **Area 17-Carraroe (Cashla Bay to Glencoh).** This area is flat, open and exposed. The landscape comprises wetland and rocky outcrop in-between the many scattered residential dwellings. The landscape is developed yet not spoilt and the overall setting of the coastal inlet and Kilkieran Bay is quite scenic.

2.20 **Area 18-Bertraghboy bay and eastern banks.** The landscape around Bertraghboy bay is undulating and rises to meet Cnoc Mordain Mountain. The land comprises rough grass and bog in amongst the scattered residential and light industrial developments. The landscape is not particularly scenic although views towards the bay from the many dwellings are expansive and quite dramatic. (Ref Plate 16)

2.21 **Area 19-West Coast (Gorteen bay to Clifden).** The coastline from Gorteen Bay to Clifden is low lying, harsh and exposed and the adjacent land is rough grassland with rocky outcrops. There is very little development within this area and the landscape is generally dramatic and scenic. (Ref Plate 17)

2.22 **Area 20-West Coast (Clifden to mouth of Killary Harbour).** The landscape varies from undulating to mountainous with scattered coniferous forestry up to 1km<sup>2</sup> in size. There are many residential developments within this area particularly in the Cleggan area, which have reduced the scenic value of the rural landscape land. However westerly sea views are expansive and dramatic.

2.23 **Area 21-Killary Harbour and southern banks.** The landscape along the southern banks of the Killary Harbour is steep heath land with no tree cover. There are no developments along this stretch of land except for a visitor center and several parking areas. The scenic value of the landscape is high due to the dramatic aerial views along the Harbour and to the Mweelrea Mountains beyond. (Ref Plate 18)

2.24 **Area 22-Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough).** This area comprises a diverse range of natural landscapes from mountains, valleys, and loughs to coniferous and deciduous woodlands. Integrated within this area are visitor facilities sensitively located to avoid visual intrusion. The

area is unspoiled and highly scenic with outstanding views throughout. (Ref Plate 24)

**2.25 Area 23-Joyces Country (including Lehanagh Loughs and south Lough Mask).** The landscape of this area includes steep mountains, heath and bog land and rough grass. Within this area woodland is confined to the valley bottom between Maumturk and Bunnacunneen Mountains. In spite of the scattered development and the many parking areas and viewing points this area is highly scenic with dramatic views throughout. (Ref Plate 25)

**2.26 Area 24-Aran Islands.** The landscape of the Aran Islands is flat stony and without tree cover. Small fields used for pasture are bound by stone walls. The coast is steep and rocky along the southern side and flat and stony along the northern side. In spite of the many new residential developments on the Aran Islands, the open character of the landscape is highly scenic with expansive dramatic views in all directions. (Ref Plates 19, 20, 21 and 22)

**2.27 Area 25-Lough Rea.** The landscape of Lough Rea is flat, enclosed and intimate. The Lough is screened to the north and the northeast by the town of the same name and to the south by the wooded slopes of the Slieve Aughty Mountains. There are many small vegetated islands in the Lough which add to its high scenic value. Around the banks of the Lough are many recreational facilities including boating, parking and picnic areas, which sit sensitively within the landscape and do not detract from the intimate landscape setting.

#### Landscape values

**2.28** Landscape values were derived for each landscape character area by consideration of environmental and cultural benefits e.g. aesthetics, ecological, historical, socio-economic, religious, mythological etc. The values were given a score ranging from low, medium, high to outstanding. Landscape values combining all environmental and cultural benefits were decided through liaison with Galway County Council Forward Planning Dept. The values are shown in Table 2.1 *Landscape sensitivity rating*.

#### Landscape sensitivity

**2.29** The sensitivity of a landscape to development and therefore to change will vary according to its character and to the importance which is attached to any combination of landscape values. The sensitivity of the character areas was derived by consideration of designations such as Special Protection Areas, Natural Heritage Areas, National Parks, by information such as tourist maps, guidebooks, brochures and by evaluation of indicators such as uniqueness, popularity, distinctiveness and quality of the elements of the area.

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sensitivity rating.

<b>CHARACTER AREA</b>	<b>LANDSCAPE VALUE</b>	<b>LANDSCAPE SENSITIVITY</b>
1. Northeast Galway (Balinasloe to Ballymoe)	Low	Class 1-Low with pockets of Class 2-Moderate
2. Shannon and Suck River Valley between Portumna and Ballinasloe	Medium	Class 4-Special
3. East central Galway (Athenry, Ballinasloe to Portumna)	Low	Class 1-Low with pockets of Class 2-Moderate
4. Southeast Galway (Clarinbridge to Gort)	Medium	Class 2-Moderate with pockets of Class 3-High
5. Northeast Galway (Tuam environs).	Low	Class 1-Low with pockets of Class 2-Moderate
6. Slieve Aughty Mountains	Medium	Class 3-High
7. Northwest Lough Derg	Medium	Class 4-Special
8. Lower Burren (Co. Galway portion).	Outstanding And Medium	Class 4-Special with pockets of Class 2-Moderate
9. Inveran to Galway City coastline	High	Class 3-High with a parallel strip of Class 4-Special
10. East Connemara Mountains (Moycullen, Recess to Glinsk)	High	Class 3-High with pockets of Class 4-Special
11. Lough Corrib and environs	Outstanding	Class 5-Unique with pockets of classes 3-High and 4-Special
12. South foothills of east Connemara Mountains (west of Salthill to Rossaveel).	Medium	Approximately half class 4-Special and half Class 3-High
13. East Galway Bay (Oranmore to Kinvarra Bay and inland to N18 road).	High	Class 3-High with a coastal edge of Class 4-Special
14. West Connemara	Outstanding	Class 4-Special
15. Lettermore and Gorumna Islands	High	Class 3-High with a coastal edge of Class 4-Special
16. West foothills of east Connemara Mountains. (Glenicmurrin Lough environs).	High	Class 3-High
17. Carraroe (Cashla Bay to Glencoh).	High	Class 3-High with a coastal edge of Class 4-Special
18. Bertraghboy bay and eastern banks	High	Class 4-Special
19. West Coast (Roundstone to Clifden).	Outstanding	Class 4-Special
20. West Coast (Clifden to mouth of Killary Harbour).	Outstanding	Class 3-High with a coastal edge of Class 4-Special

21. Killary Harbour and southern banks	Outstanding	Class 5-Unique with pockets of Class 4-Special
22. Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough).	Outstanding	Class 5-Unique
23. Joyces Country (including Lehanagh Loughs and south Lough Mask).	Outstanding	Class 5-Unique with pockets of Class 4-Special
24. Aran Islands.	Outstanding	Class 5-Unique with pockets of Class 4-Special
25. Lough Rea	High	Class 4-Special

## 2.3 Wind farm

### Existing wind farms

2.30 Galway Energy Agency Ltd has assisted in providing some of the data on existing operational wind farms in Galway. Currently there is only one single operational wind farm. This wind farm is located at Knock South two miles west of Spiddeal. The farm comprises four turbines and approval has been recently given for and an additional turbine at this farm. 2.31 Permissions have been granted for four wind farms in the Slieve Aughty Mountain area ranging from 10 –25No. turbines in each farm and a further extension to one of the farms at Derrybrien. Applications have also been approved for 3No. turbines on Inis Meain, 1No. on Inis Oirr and 1No. at Costelloe.

2.32 A planning application for a wind farm in Connemara was refused (reasons not identified)

### Environmental context

2.33 Wind energy has major environmental benefits: it is an inexhaustible and renewable resource and it generates electricity without the use of fossil fuels thus avoiding air pollution. However, local impacts on the environment can occur dependant on location and context, these comprise fauna and flora, noise, archaeology, human safety and visual impact.

2.34 The environmental effects of wind farms are discussed below generally and where appropriate detailed reference is made to situations within Galway County. These have assisted in the formation of preliminary exclusion zones. Our review of the Altner Study carried out by Cork County noted that 'Exclusion or buffer zones relating to rivers, canals, lakes, beautiful areas (NHA, SPA), monuments, campsites and single or scattered dwellings should not be adopted when assessing the resource'. It was thought that these exclusion zones could make the assessment overly restrictive, leading to fragmentation. However, due to the sensitive nature of many of the nature conservation

sites and the National Park within Galway preliminary exclusion zones have been included at this stage and are shown in Table 2.3 at the end of this chapter.

#### *Fauna and flora*

2.35 According to information from the Irish Peatland Conservation Council, wind farm development may impact on the functioning of intact Peatland systems. The laying of the turbine foundations can cause localised drying out and compaction of peat leading to habitat destruction. Construction works in particular the installing of infrastructure i.e. power lines, service roads etc. causes fragmentation of extensive blanket bog areas and damage to fragile hydrological systems. 2.36 Similarly the Irish Energy Centre report that wind farm development may cause disruption to bird natural habitats combined with the relatively small risk of collision of birds flying into the wind turbines or rotational flow behind the rotor.

2.37 Much of the coastal and uplands areas of Galway which are likely to be rich in wind resource also have a nature designation in place i.e. NHA, SPA, SAC etc. In order to avoid the above impacts on fauna and flora it is suggested that wind farms be excluded from these areas and allowed only along the perimeter i.e. within a zone of 30m from perimeter of these areas, close to existing infrastructure (excluding totally areas of geological interest, where underground or surface elements may be damaged).

#### *Noise*

2.38 According to information received from the Irish Energy Centre the noise generated from a modern, medium sized wind turbine at 200m would be about 45dB i.e. quieter than a typical living room and by keeping enough distance from built-up or other noise sensitive areas the potential for noise pollution is reduced. Additionally carefully designed rotor blades with low rotational speed in combination with noise insulation of gear boxes and generators help mitigate noise impacts.

2.39 Clearly exclusion zones are required around the residential and institutional buildings in Galway to minimise noise pollution and establish available areas for wind farm development. For reasons of noise a distance of 200m from settlements is recommended.

#### *Human Safety*

2.40 According the Irish Energy Centre (IEC) there is a remote chance of a damaged rotor blade being thrown from a turbine, or of ice flying from the blade in extremely cold conditions. As such it is recommended an exclusion zone around areas frequented by large amounts of people be established. It is suggested that a zone of 300m be considered from towns or settlements in Galway but not from single or scattered dwellings which could lead to an overly restrictive assessment.

#### *Archaeology*

2.41 As for noise an exclusion zone is necessary to protect archaeological monuments particularly from the construction process. The Heritage Council has appointed consultants to review the potential impacts on heritage of the expansion of the wind energy industry in Ireland. This study is due for completion at the end of April 2002. According to the consultants for the study they are unlikely to recommend an exclusion zone and will suggest that each planning application for a wind farm is reviewed individually accompanied information on the location and environmental impact on the nearest heritage sites. However for the purposes of this project it is recommended that for human safety reasons the 300m exclusion zone previously

mentioned above is implemented around National Monuments in Galway where a relatively high number of pedestrians are expected.

#### *Visual impact*

2.42 Wind turbines are striking and dynamic elements within a landscape setting. Personal taste varies significantly regarding the siting of wind farms and public acceptability of wind farms has been the subject of many studies and is often the deciding factor in their location. Information from the Irish Energy Centre on opinion polls suggest that installations in clusters are more acceptable than isolated turbines particularly when residents understand that they yield a larger electrical output. Also research carried out for the Scottish Executive Study on wind farms reported that residents living near to wind turbines thought the following:

- 27% thought the turbines were of no environmental impact
- 21% thought the turbines were a Landmark and looked good
- 18% liked the cheap electricity produced
- 5% liked the effects on the local economy
- 3% didn't like the wind farms

2.43 Mitigation's measures to reduce visual impacts of wind farms are designed to create visual harmony and balance between the landscape and the development by influencing the style of turbines and towers, the colour of the structure and layout on site as well as minimising the size and location of secondary structures i.e. transformers, power lines and fences to reduce negative impacts. To enhance the visual harmony of the turbines from middle and long distance views it is suggested that the layout of wind turbines on hillsides may be more acceptable to the eye if the turbines are spaced generally in straight lines following the contours, and if more than one row is required the turbines in alternate rows be staggered. For turbines on flat land i.e. along the coast, less visual intrusion to the sea backdrop from scenic roads may result by grouping of turbines in clusters rather than even spacing along the coastline.

2.44 Information from the Irish Energy Centre on visual impacts of turbines suggests that the height of turbines is not a major factor on their visual impact, more importantly to the eye is the ratio between the shaft height and rotor diameter and also the motor speed; bigger rotors rotate more slowly and for that reason are considered to be more restful.

2.45 Visual impact also depends on the visibility of the turbines and the number of turbines should reflect the scale of the landscape setting, if natural screening is present and if the scale of the wider panoramic view is sufficiently large to incorporate wind farm without changing the overall view substantially. In terms of colour WSA Atkins current research recommends off-white as best within a landscape setting, Danish architects Møller & Grønborg Architects and planners recommend that white is too strong, grey is ugly, at short distances, they also report that the Germans paint the lower parts of the tower in green, whilst the Dutch paint the lower parts in brown.

2.46 Landscape classification and landscape sensitivity play an important part in determining visual impact and suitability of siting wind farms. The European Best Practice Guidelines for Wind Energy recommend that a 'zone of visual influence' be established around potential sites for wind farms to establish properties that will be able



to view the development. French consultants Abies suggest a formula for establishing the approximate size of the zone of visual influence as follows:  $\text{Radius} = (100 + E) * H$ . With E being the number of wind turbines and H is the height of one individual turbine.

2.47 For reasons of visual impact it is therefore recommended that land based (as opposed to off-shore) wind farms in Galway be located in clusters rather than in isolated locations where possible, that the turbines be off-white in colour and that on elevated positions i.e. hillside locations, turbines be spaced generally in straight lines following the contours, and if more than one row is required the turbines in alternate rows be staggered. For turbines on flat land i.e. along the coast, it is recommended that turbines be grouped in cluster rather than even spacing along the coastline. It is also recommended that where applications are submitted to the authority for wind farms that the visual impact study includes an assessment of visual intrusion or visual obstruction within an established 'zone of visual influence'.

#### *Electrical Infrastructure*

2.48 The feasibility of a wind energy site will in part be dependant on the ability to connect the site to grid and the capacity of the grid to accept additional electricity. It has been identified that Countrywide there is a serious shortage of capacity on the network and further investment is required in network upgrades if the targets for additional green electricity are to be delivered. It is understood that over the period 2000-2005 ESB plan to invest some £1.4 billion in additions and improvements to the electricity transmission and distribution networks.

2.49 Generally the electricity network is designed to transmit electricity from large thermal plants. Typically the best wind resource exists in remote areas where often the existing electricity network is weak. Consequently upgrading of the grid is necessary. Connection is normally to a 38kV circuit although the ESB will allow connection to a 110 kV circuit if there is no suitable 38kV circuit nearby.

2.50 An overview of the ESB 38 kV transmission system in the areas, which have been identified as having potential in terms of wind speed, shows that in particular there is a lack of electrical infrastructure in the northwest quadrant of the county. This could be a significant constraint to development.

#### *Wind resource*

2.51 The Irish Energy Centre has stated that a national wind resource assessment for Ireland on a county-by-county basis has been tendered, but not yet awarded. The study is likely to take at least six months and information on the wind resource for each county will be available towards the end of summer 2002. For the purposes of this study information was taken from 3 sources: a very low-resolution wind atlas from the Numerical Wind Atlas, Risoe, June 2001 (Figure 7), the European Wind Energy Atlas (Ireland) and preliminary wind data from Galway County Council (Figure 6).

2.52 Most wind turbines start to operate at around 5-6m/s and it is understood that based on the contract offers of the Department of Public Enterprise AER5 program (3.79p/kW) an annual average wind speed of around 8m/s is required. However under the current Government wind program, wind speeds of 7.5m/s may be acceptable later in 2002. For the purposes of this study, areas of Galway, which have a potential wind capacity of 6m/sec or more, will be considered for compatibility with the landscape setting. It is also important to note that wind speed relates to height above ground level and wind speed increases with height e.g. there is 60% more power available at a site

with an average wind speed of 7m/s compared to a site with a wind speed of 6m/s.

2.53 Where the wind speed is shown below 6m/s we are discounting wind energy sites however by using turbines over 50m high the scheme may become viable in relation to wind speeds. Also, a reference height of between 45 and 50m above ground level has been assumed for this study taken from the above sources.

2.54 Based on the update to the European Wind Energy Atlas (Ireland) it would appear that with the exception of the more elevated area of the Slieve Aughty Mountain Range the eastern half of the County is not wind rich. The average wind speed over the majority of the eastern half of Galway is shown as 5m/s at a height of 45-50m above ground level.

2.55 Based on the landscape character descriptions earlier in this chapter those areas with this wind resource at or above 6.0 are located in the west of the county and along coastal locations as shown in table 2. Only areas 1, 2, 3, 4, 5 and 7 are estimated to have poor wind resource for wind turbines at a height of 45-50m above ground level.

**Table Error! Style not defined..Error! Bookmark not defined. - Wind resource and Landscape sensitivity rating.**

<b>CHARACTER AREA</b>	<b>APPROX. WIND RESOURCE</b>	<b>LANDSCAPE SENSITIVITY</b>
	<b>m/sec</b>	
1.Northeast Galway (Balinasloe to Ballymoe)	Below 6.0	Class 1-Low with pockets of Class 2-Moderate
2. Shannon and Suck River Valley between Portumna and Ballinasloe	Below 6.0	Class 4-Special
3. East central Galway (Athenry, Ballinasloe to Portumna)	Below 6.0	Class 1-Low with pockets of Class 2-Moderate
4. Southeast Galway (Clarínbridge to Gort)	Below 6.0	Class 2-Moderate with pockets of Class 3-High
5. Northeast Galway (Tuam environs).	Below 6.0	Class 1-Low with pockets of Class 2-Moderate
6. Slieve Aughty Mountains	Between 6-8	Class 3-High
7.Northwest Lough Derg	Below 6.0	Class 4-Special
8. Lower Burren (Co. Galway portion).	6.0	Class 4-Special with pockets of Class 2-Moderate
9.Inveran to Galway City coastline	Between 7-7.5	Class 3-High with a parallel strip of Class 4-Special
10. East Connemara Mountains (Moycullen, Recess to Glinsk)	Between 6-8	Class 3-High with pockets of Class 4-Special
11. Lough Corrib and environs	6.0	Class 5-Unique with pockets of classes 3-High and 4-Special
12. South foothills of east Connemara Mountains (west of Salthill to Rossaveel).	Between 6-7.5	Approximately half class 4-Special and half Class 3-High
13. East Galway Bay (Oranmore to	Between 6-	Class 3-High with a coastal

Kinvarra Bay and inland to N18 road).	7.5	edge of Class 4-Special
14. West Connemara	Between 6-7.5	Class 4-Special
15. Lettermore and Gorumna Islands	Between 6-7	Class 3-High with a coastal edge of Class 4-Special
16. West foothills of east Connemara Mountains. (Glenicmurrin Lough environs).	6.0	Class 3-High
17. Carraroe (Cashla Bay to Glencoh).	Between 6-7.5	Class 3-High with a coastal edge of Class 4-Special
18. Bertraghboy bay and eastern banks	Between 6-7.5	Class 4-Special
19. West Coast (Roundstone to Clifden).	Between 6-7.5	Class 4-Special
20. West Coast (Clifden to mouth of Killary Harbour).	Between 6-7.5	Class 3-High with a coastal edge of Class 4-Special
21. Killary Harbour and southern banks	Between 6-10	Class 5-Unique with pockets of Class 4-Special
22. Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough).	Between 6-10	Class 5-Unique
23. Joyces Country (including Lehanagh Loughs and south Lough Mask).	Between 6-10	Class 5-Unique with pockets of Class 4-Special
24. Aran Islands.	Between 8-8.5	Class 5-Unique with pockets of Class 4-Special
25. Lough Rea	6.0	Class 4-Special

2.56 The following zones are proposed for to classify wind farm suitability based on available preliminary wind resource, outside exclusion zones and acceptable landscape sensitivity classification;

- **'Strategic areas'**- where wind farm development is considered appropriate i.e. wind resource at or above 6, outside all exclusion zones (see table 2.3) and in areas of low to high landscape sensitivity i.e. class 1-3
- **'Areas for consideration'**- where each project would be dealt with on its merits i.e. within perimeter areas of exclusion zones and in areas of special to unique landscape sensitivity i.e. class 3-5
- **'No go areas'**- where wind farms development is considered inappropriate i.e. wind resource at or above 6, inside exclusion zones and in areas of unique landscape sensitivity i.e. class 5

2.57 The exclusion zones listed below in Table 2.3 have been suggested based on current opinion and research.

Table **Error! Style not defined..Error! Bookmark not defined.** - Preliminary exclusion zones in proximity to wind farms

<b>Assumed separation distances</b>	<b>Distance (m)</b>
City, town and National Archaeological Monument	300m based on safety restriction where pedestrians can walk unimpeded
Railway line	100m
National road	100m
High voltage cable	50m
Galway Airport	Outside existing aviation exclusion zone
Forestry	50m
Nature designation sites i.e. NHA, SPA, NR etc.	No turbines allowed within these nature conservation areas however, turbines may be allowed within a zone of 30m from perimeter of these areas, but not within 100m of the high tide mark in coastal areas.



## **Landscape and Landscape Character Assessment for County Galway**

### **3. Recommendations**

#### **Landscape**

3.1 In order to assist in the creation of guidelines for siting and design of new development, including forestry and wind farms, the following principles have been created for the production of the landscape sensitivity ratings for each character area.

#### **1. Northeast Galway (Ballinasloe to Ballymoe) Landscape sensitivity principally class 1-low with areas of class 2- moderate**

3.2 Development is prohibited in the areas (primarily bogs) that carry a nature designation. Generally the landscape is flat to undulating in this area. Height restrictions should apply to built development in the flatter areas to avoid long distant visual intrusion or obstruction of the many focal points identified in the landscape character analysis. Development of all scales in this class 1 area should be either set close to one of the existing large blocks of forestry or screened by either new commercial forestry or existing mixed deciduous woodland.

3.3 Due to the rural nature of the area scattered development in the class 1 area which cannot be screened by forestry should be of natural stone or rendered finish of a soft colour that is sympathetic to the colours in the landscape generally. New development should be surrounded by hedgerow to reinstate sections lost during construction and to continue the ecological corridor effect.

#### **2. Shannon and Suck River Valley between Portumna and Ballinasloe Landscape sensitivity class 4-special**

3.4 The landscape of the river valley is flat bordered by deciduous trees and wateredge planting. There are local scenic views along the river and to the local heritage sites. Long distant views are gained of the Slieve Aughty Mountains.

3.5 Development should not be of a nature, which would damage the sensitive ecological habitats of the river corridor. Development should be located within pockets

of existing vegetation to assist screening. Buildings should be clustered together to avoid ribboned development along the river edge. This will maintain long distant views out to the countryside beyond.

3.6 Suitable developments should be in keeping with an intimate water edge environment. Residential developments should be stonework or rendered in white or soft colours (sympathetic to the landscape setting), or timber clad. Paths should be timber decking adjacent to the water edge, or a natural 'soft' finish i.e. crushed stone surfacing. Street furniture i.e. seats, fencing, litter bins should be of timber to reflect the rural natural setting of the river corridor. Large conspicuous, brightly coloured signs will cause visual intrusion within the natural water edge setting and should be replaced with low-key timber signage (excluding road or safety signs).

### **3. East central Galway (Athenry, Ballinasloe to Portumna) Landscape sensitivity principally class 1-low with areas of class 2- moderate**

3.7 The landscape is flat therefore height restrictions should apply to built development to avoid long distant visual intrusion.

3.8 Development is prohibited in the areas (primarily bogs) that carry a nature designation. Development in the class 1 area should be either set close to existing medium sized blocks of forestry or screened by either new commercial forestry or mixed deciduous woodland, both of which are present in this area.

3.9 Due to the rural nature of the area scattered development which cannot be screened by forestry should be of natural stone or rendered finish of a colour that is sympathetic to the colours of the landscape. Stonewalls are a distinct element of the character of this area and should be constructed to match traditional style around new development.

### **4. Southeast Galway (Clarinbridge to Gort) Landscape sensitivity principally class 2- moderate with areas of class 3-high**

3.10 Development is prohibited in the areas that carry a nature designation. Development is permitted in the class 2 area. Due to the undulating nature of the landscape, development of small-scale buildings will be easily accommodated and naturally screened in the natural hollows. Larger development may require earthworks (cut and fill) and the associated flattening of areas may alter the intimate character in existence.

3.11 There is little coniferous or deciduous forestry in this area therefore large scale screening by forestry is not appropriate, screening should be achieved using the natural topography. Development should not block important long distant views of the Burren or Slieve Aughty Mountains or local focal points as these views are of regional

landscape value.

3.12 New development should be surrounded by hedgerow to reinstate sections lost during construction and to continue the ecological corridor effect.

#### **5. Northeast Galway (Tuam environs). Landscape sensitivity principally class 1-low with areas of class 2- moderate**

3.13 Development is prohibited in the areas (primarily bogs) that carry a nature designation.

3.14 In the class 1 area, the landscape is generally flat therefore height restrictions should apply to built development in to avoid long distant visual intrusion. This area has very little woodland or forestry present and owing to the low scenic value of the area may be suitable for commercial forestry development. Large-scale development should be screened by either new commercial forestry or mixed deciduous woodland.

3.15 Due to the rural nature of this class 1 area, scattered development which cannot be screened by forestry should be of natural stone or render with colour finish to be sympathetic to the colours of the existing landscape.

3.16 New development should be surrounded by hedgerow to reinstate sections lost during construction and to continue the ecological corridor effect.

#### **6. Slieve Aughty Mountains Landscape sensitivity principally class 3-high**

3.17 Development of additional forestry is suitable in this class 3 area. However, the softening of the coniferous edge with native deciduous planting is recommended where the area joins sensitive sites to the north (Lough Rea) and the east (Lough Derg).

3.18 New recreational facilities associated with the forestry should be developed using natural materials i.e. fencing, street furniture and shelters should be of timber. Lighting of amenity areas is not appropriate within the rural setting and from elevated hillsides. Carparking should be set within existing tree canopy where it will not cause visual intrusion from viewpoints.

#### **7. Northwest Lough Derg. Landscape sensitivity class 4-special**

3.19 The attractive waterside edge setting is open and flat and is therefore highly sensitive to development. In general, small-scale development should be located adjacent to existing settlements. Development at the water edge is inappropriate, as it would be exposed to view.

3.20 Recreational activities could be encouraged nearer to the water edge and already include camping and caravan sites. There is scope to create opportunities for

fishing and walking.

#### **8. Lower Burren (Co. Galway portion). Landscape sensitivity class 4-special and an area of class 2-moderate**

3.21 Development is prohibited in the limestone pavement area to the west (indicated as class 4 on the landscape sensitivity map) which carries landscape and ecological designations and is therefore deemed highly sensitive.

3.22 The eastern section of this area (indicated as class 2 on the landscape sensitivity map) is considerably less sensitive to development. The flat open aspect however implies the need for height restrictions on development in order to minimise visual intrusion on the limestone area.

3.23 Small-scale development may be appropriate in the eastern section of this area but should be low in height and set within the natural hollows of the landscape or adjacent to the existing planting to avoid visual intrusion of the western area from the nearby roads including the N67.

#### **9. Inveran to Galway City coastline Landscape sensitivity class 3-high with a parallel strip of class 4-special**

3.24 The coast along this area is scenic and flat with rocks and sand merging with natural grassland. However, views of Galway Bay, North Clare coast and the Aran Islands from the coastal road (R336) have been obscured in many places by mixed development. There are pockets of this landscape which command striking seaward views, hence development of all kinds should be prohibited

3.25 Further development within this area should be grouped in clusters, close to existing settlements and should avoid the seaward side of the R336 road to avoid further visual obstruction of the scenic coastline.

3.26 Development within the immediate coastal area such as improved visitor access and parking near to the coast should be sunken and surrounded by natural coastal vegetation for screening. Finishes should be sympathetic to coastal environment i.e. crushed stone and sand.

#### **10. East Connemara Mountains (Moycullen, Recess to Glinsk). Landscape sensitivity class 3-high with pockets of class 4-special**

3.27 The landscape comprises mountainous areas with slopes covered with coniferous forestry and lower areas of rocky outcrops and rough grassland around the many small loughs and turloughs.

3.28 Development is prohibited in the areas (indicated as class 4 on the landscape sensitivity map) that carry a statutory nature designation. In the remaining mountainous areas (indicated as class 3 on the landscape sensitivity map),



development should not protrude above the existing ridgelines in order to maintain long distant views of the Connemara mountains. Similarly long distance views to Galway Bay and the Aran Islands from elevated roads on the mountainsides should not be obscured; development along these routes should be located on the northern side of the N59 road to maintain views for tourist traffic. Where possible development should be set within existing forestry or surrounded by coniferous forestry for screening. Additional large-scale forestry is appropriate in this area, refer to specific forestry recommendation.

3.29 Several square kilometers of the Connemara bog complex in the lower areas carry both landscape and ecological designations hence development should be prohibited although creation of native forestry may be appropriate. Development in this area which cannot be screened by forestry should be of natural stone or earth tone colour finish to blend with the natural landscape colours.

### **11. Lough Corrib and environs. Landscape sensitivity class 5-unique with pockets of class 4-special and class 3-high**

3.30 The land around the northern part of the Lough is undulating heath, bog and coniferous forestry; it is highly scenic and includes many facilities for visitors. The landscape of this portion of the area is more natural and undeveloped than in the south and is close to the scenic mountainous areas of Connemara. Development in this area will be visible from the hillside walks of Joyce Country and should where possible be located within existing forestry and natural hollows or finished in materials sympathetic to the surrounding landscape to minimise visual intrusion. Bright, bold or reflective colours should be avoided on a large scale within this expansive natural setting. Suitable materials such as stone and finishes in an earth tone colour are appropriate.

3.31 In the south where the land is relatively flat and expansive, elevated views are not available. No further development except that associated with essential housing needs is recommended near to the water edge at Lough Corrib. In the flat open areas (generally class 4), buildings should be low in height and set within clusters, which can be screened by woodland planting. Development should not be of a nature, which would pollute the sensitive waters of the Lough or the water edge environment.

3.32 Residential developments should be stonework or rendered in white or other colours that blend sensitively with the rural setting. Any existing paths or parking places for scenic views should be maintained and surfaced using natural materials e.g. timber or crushed stone. Street furniture i.e. seats, fencing, litter bins should be of timber to reflect the rural natural setting of the Lough. Large conspicuous, brightly coloured signs will cause visual intrusion and should be replaced with low-key timber signage

### **12. South foothills of east Connemara Mountains Landscape sensitivity class 4-special and class 3-high**

3.33 The landscape of the foothills is undulating heath and scrubland with regular rocky outcrops. The area is generally undeveloped and has expansive views in a

southerly direction across Galway Bay towards County Clare.

3.34 Due to the many statutory nature designations associated with the Loughs in the western side of this area (indicated as class 4 on the landscape sensitivity map) and the generally wet ground conditions, development in this portion is limited to forestry plantation. Development is prohibited on the areas specifically covered by the statutory nature designations. Small scale and low buildings may be appropriate but should not intrude on the skyline as viewed from the R336 looking north. Development in this area which cannot be screened by forestry should be of natural stone or rendered with a colour finish to blend with the natural landscape colours. Stonewalling to match the distinct walling pattern in existence should surround development.

3.35 On the eastern side of this area there are less statutory nature designations and development potential is greater. Again development should be as low as possible in height so as not to intrude or obstruct views from tourist routes (N59) and should be set within natural hollows or slightly sunken into the ground and screened with natural scrub type vegetation. Natural stone should be used as a finish material or render of a colour that blends with the natural landscape colours.

### **13. East Galway Bay (Oranmore to Kinvarra Bay and inland to N18/N67 road). Landscape sensitivity class 3-high with the coastal strip class 4-special**

3.36 The sinuous coastline is scenic and is relatively undeveloped. It is therefore highly sensitive. Future development should therefore be located further inland in order to protect this coastline and the panoramic views to be gained from it.

3.37 In general, groups of dwellings or holiday homes should be located further inland within the area indicated as class 3 on the landscape sensitivity map. These developments are to be located close to existing settlements. As in other areas, advantage is to be taken of both landform and existing vegetation to carefully conceal these developments from view.

### **14. West Connemara Landscape sensitivity class 4-special**

3.38 The landscape is flat low-lying bog and heath with many scattered lakes and turloughs. There is very little development and the landscape has a distinct atmospheric quality albeit generally not highly scenic.

3.39 Many areas are covered by statutory nature designations, for which development is prohibited. Outside these areas, particularly in wet ground conditions, there is scope for forestry. Small scale and low buildings may be appropriate near to the existing settlements on perimeter of this area but should not intrude on the skyline of the Connemara Mountains as viewed from the N59 looking north. Development in this area, which cannot be screened by forestry, should be of a colour finish to blend with the natural colours of the bog and heath land.

3.40 Development beyond essential housing needs should be restricted within the vicinity of the scenic road route between Ballinaboy and Toombeola.

**15. Lettermore and Gorumna Islands Landscape sensitivity class 3-special with the coastal strip class 4-special**

3.41 The landscape is flat, open, rough grass and scrub with frequent rocky outcrops. There are many small scale residential and community developments within this area most with south and west facing views towards Galway Bay.

3.42 Due to the open nature of the landscape and the high visibility into the area from the surrounding landscape and roads new development should be intimate in scale, low in both height and scale and set back from the coastal edge.

3.43 Woodland is inappropriate in this area and cannot be recommended for screening new buildings. All development therefore should be finished with natural materials in softer colours, avoiding the use of bright and bold colours.

**16. West foothills of east Connemara Mountains. (Glenicmurrin Lough environs). Landscape sensitivity class 3-high**

3.44 This landscape is flat to undulating, open with little vegetation and comprises lakes and bog land. There is very little development in this area and it is not of high scenic value. Development is prohibited in the many areas covered by statutory nature designations. There is scope for forestry outside these areas where the ground conditions are generally wet. Small scale and low buildings may be appropriate but should not intrude on the skyline as viewed from the R336 looking north. Development in this area which cannot be screened by forestry should be of natural stone or rendered with a colour finish to blend with the natural landscape colours.

**17. Carraroe (Cashla Bay to Glencoh). Landscape sensitivity class 3-high with the coastal strip class 4-special**

3.45 This area, albeit scenic is developed in places. For this reason, new developments should be located close to the existing settlements in order to preserve and protect the undeveloped areas.

3.46 Housing should be developed on a small scale. As this is a flat landscape setting, emphasis on height must be avoided in order to minimise the visual impact of these new developments.

3.47 Advantage is to be taken of natural hollows in the existing landform and existing vegetation in order to site development with minimal visual impacts. Scenic views must be protected at all times. This applies particularly to the coastline area.

3.48 Housing developments should be generally of simple detailing. Use of indigenous materials, typically stone or slate or materials that match the character of

the area is recommended.

3.49 Development is prohibited in areas covered by statutory nature designations.

#### **18. Bertraghboy bay and eastern banks Landscape sensitivity class 4-Special**

3.50 The landscape around Bertraghboy Bay is undulating grass and bogland. There are many scattered developments (residential and light industrial) which sit around the bay. Further development of this nature are appropriate but should be located in the hollows of the landscape and not on the highpoints. Additionally development should be set back from the water edge so as not to obscure views from the coastal routes (R340 and R342).

3.51 Woodland is inappropriate along this coastal stretch apart from native woodland at certain locations. As a result development should not rely on woodland planting from screening.

3.52 Development is prohibited in areas covered by statutory nature designations.

#### **19. West Coast (Roundstone to Clifden). Landscape sensitivity class 4 -Special**

3.53 The landscape from Roundstone to Clifden is low lying, harsh and exposed. There is considerable development along this stretch of coastline and this has compromised the high scenic quality and undisturbed views in the area. Development between the coast road (R341) and the shoreline should be restricted in order to maintain the undisturbed landscape character. However improved access to the wateredge would increase the tourist activity of the coastal resource. Access should not be provided directly to the water edge but should be limited to pocket car parks off the main road which could be sunken or surrounded by stone walls to reduce visibility and assimilate in to the landscape.

3.54 Development to the north and eastern side of the coastal road should be low lying and grouped in clusters to minimise changes to the landscape character. Development should be finished in stone or render finished with soft colours to blend with the surrounding landscape.

3.55 Woodland is inappropriate along this coastal stretch apart from native woodland at certain locations.

3.56 Development is prohibited in areas covered by statutory nature designations.

#### **20. West Coast (Clifden to mouth of Killary Harbour). Class 3-High with a coastal edge of Class 4-Special**

3.57 The landscape of this area varies from undulating to mountainous. There are many residential developments within this area particularly near Cleggan, which have reduced the scenic value of the area. However westerly sea views are expansive and dramatic and should be protected by restricting further development close to the

shoreline. New buildings should be located next to existing development or within the natural hollows in the foothills to the east and be finished in stone or render of a colour to blend with the surrounding landscape.

3.58 Woodland is inappropriate along this coastal stretch apart from native woodland at certain locations.

3.59 Development is prohibited in areas covered by statutory nature designations.

## **21. Killary Harbour and southern banks Landscape sensitivity class 5 Unique**

3.60 The water edge is highly scenic and therefore is highly sensitive to development of any kind. In general, development should be confined only to the maintenance of the existing road routes and associated parking places and viewing points.

3.61 Development could be accommodated further inland however care must be taken not to obscure views of the harbour or the Mweelrea Mountains.

3.62 New housing or other facilities would ideally be located within existing settlements (Leenane) or accommodated within natural hollows or pockets of existing planting in order to minimise visual intrusion.

3.63 Development is prohibited in areas covered by statutory nature designations.

## **22. Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough). Landscape sensitivity class 5 Unique**

3.64 In general, this area is highly scenic and is therefore highly sensitive to development. Development should be restricted to the upkeep of existing roads and parking places.

3.65 There is scope for creating new parking / stopping areas for visitors to take advantage of the spectacular views. The parking places would take the form of a discreet extension of the existing road surface. Surface materials should be chosen to match the character of the area. A crushed stone or aggregate surface is preferable to an asphalt surface

3.66 Within the area generally, there is limited scope for small holiday settlements. These would ideally be located in the low-lying areas or nestled within existing woodland planting.

3.67 Development is prohibited in areas covered by statutory nature designations.

3.68 The designated national park area is to remain free of any development of any kind.

**23. Joyces Country (including Lehanagh Loughs and south Lough Mask).  
Landscape sensitivity class 5 Unique with road corridors of class 4-Special**

3.69 The eastern side of this area has a number of villages in a flat to undulating landscape setting. Further west, the landscape is more rugged and mountainous.

3.70 Development of any additional tourist facilities for Joyces Country should be located in the eastern side of this area, close to existing man made structures and where screening by native woodland would be in character with the surroundings.

3.71 The mountainous area is highly scenic. However the presence of scattered dwellings have reduced the scenic quality in certain areas. Further development should be limited to road improvements and upgrading of hillside footways. Street furniture i.e. seats, fencing, litter bins should be of timber to reflect the rural natural setting. Large conspicuous, brightly coloured signs will cause visual intrusion and should be replaced with low-key timber signage.

3.72 Development is prohibited in areas covered by statutory nature designations.

**24. Aran Islands. Landscape sensitivity class 5-Unique**

3.74 The landscape of the Aran Islands is flat, open and highly scenic. The northeast-facing coast slopes gently down to the water edge and is visible from the mainland on Galway Bay. Proposed development should be low in height and of materials and finishes to match surrounding landscape. Development of large scale woodland is not appropriate on the Aran islands therefore the possibility of screening large development with forestry is not possible. Development should be located in natural hollows within the landscape where natural screening is possible.

3.75 Stonewalls to reinstate sections lost during construction should surround new development.

**25. Lough Rea Landscape sensitivity class 4 Special**

3.76 The landscape surrounding Lough Rea is flat; vegetation encloses the water body and has created an intimate setting. Development should be small scale and either set within clumps of existing vegetation or screened by proposed broadleaf planting.

3.77 Development on the waterfront associated with tourism should not intrude upon views from the other side of the Lough and should be screened by earth banks with water edge planting.

3.78 Street furniture i.e. seats, fencing, litter bins should be of timber to reflect the rural natural setting. Large conspicuous, brightly coloured signs will cause visual intrusion within the natural wateredge setting and should be replaced with low-key timber signage.

3.79 Development is prohibited in areas covered by statutory nature designations.

National Monuments, Archaeological sites, sites of historical or heritage interest and other listed buildings / structures.

3.80 In all of the landscape character areas, there are a range of buildings and structures which are currently protected or are worthy of protection. It is recommended that no development takes place on these sites. Where applications for development arise in the vicinity of these sites, expert advice must be sought in respect of an exclusion zone outside of which development can take place.

### **Planning considerations for further protection of land.**

3.81 In order to protect areas of rural Galway from inappropriate development which may alter the scenic quality of the landscape consideration was given to areas for designation as Areas of Special Amenity or as a Landscape Conservation in accordance with the Planning and Development Act 2000. The areas which could benefit from protection of their scenic qualities are as follows:

- Kylemore Abbey Area
- Coastal zone (particularly 50m either side of coastal road) from Galway Bay to mouth of Killary Harbour
- Maumturk Valley (should it be included as an NHA).
- Corridor southeast of Oughterard (should it be designated as an area of high scenic quality- currently got no protection in the development plan).
- Gaeltacht Regions and Aran Islands (important cultural tourism niches as per Blueprint for Success – A Development Plan for the West 2000-2006).
- Slieve Aughty Mountains (areas of high scenic amenity as per the GCC Development Plan).
- The Inagh Valley route (on the R341 and R344) between Roundstone extending north towards Castlebar (Co Mayo).
- All other areas we classed as 4/5 are areas of High Scenic Amenity or Outstanding Scenic Amenity as per the GCC Development Plan.

The methodology for this process is described briefly below.

#### ***Area of Special Amenity***

3.82 In the opinion of the Planning Authority, if an area is deemed to be *of outstanding natural beauty* or of its *special recreation value*, an area should be declared to be an area of special amenity. An order may be made to do so and should state the objective of the planning authority in relation to the preservation or enhancement of the character or special features of the area including objectives for the preservation or limitation of development in the area.

3.83 If it appears to a minister that an area should be declared to be of special

amenity or of its special recreational value and having regard to any benefits for nature conservation he/she may direct a planning authority to make an order in respect of this area. This order shall be revoked or amended by the minister. If two planning authorities are concerned either planning authority may make the order with the consent of the other. Any order made may be revoked by a subsequent order.

3.84 The planning authority must advertise a notice in the newspaper of its intentions with regard to the site, stating; the fact that the order has been made and a description of the area; naming a place where the order and a map can be viewed; specifying a period by which objections can be made; specifying that the order requires confirmation by the board; where any objections are made an oral hearing will ensue.

3.85 The planning authority may submit the order with or without objections to the board. . If no objections are made then the board may confirm the order with or without modifications, or refuse to confirm it. If objections are not withdrawn then the board may hold an oral hearing.

### ***Landscape Conservation Area***

3.86 A planning authority may designate an area as a landscape conservation area. A minister may prescribe any development, which shall not be exempted development. Development described by the minister may be subject to conditions or restrictions.

3.87 Planning Authority must put a notice in the paper when/where it proposes to make an order; it shall state the landscape conservation area, where a map may be viewed; the location of the area; and any development that is proposed for the area. Submissions or observations regarding the proposed order may be made. Submissions may be made to the planning authority not less than 6 weeks, which will be taken into account, by the planning authority.

3.88 The members of the planning authority may make the order with or without modifications or may refuse to make it. The Planning authority shall give notice of its intention to amend or revoke the order as the case may be. A proposed notice shall be posted on one or more newspapers stating that the planning authority wishes to amend or revoke the order and inviting submissions or objections to the planning authority.

3.89 The planning authority considers the amendments and may or may not refuse to make the order as the case may be. Before making an order the planning authority may consult any state authority where it considers that any order relates to the functions of that state authority. Particulars of any order may be entered in the register.

## **Forestry**

### ***General recommendations***

3.90 Irrespective of the landscape value of the location, new forestry areas need to be well designed to integrate into the surrounding landscape. The Forest Service has produced guidance on this topic 'Forestry and the Landscape Guidelines' July 2000, which should be followed in planning new forestry areas. Some of the key issues relating to forestry planning and design are set out below. These have been split into



upland landscapes and rolling farmland landscapes.

Upland landscapes

- **Forest size should respect the scale of the surrounding landscape by developing large continuous forests**
- **Locate on lower ground and mid-slopes avoiding higher peaks and ridges**
- **Avoid angular shapes, respond to changes in landform including streams valleys and knolls by the use of fluid shaped edges and open space**
- **Avoid sharply defined and dense conifer edges, create gradual transition from forest to open ground**
- **Use mix of species including some deciduous (larch comes into this category as a deciduous conifer) to create colour and texture variety**

Rolling farmland landscapes

- To retain the existing field patchwork character, small or medium sized forests are more appropriate than large, and these should be dispersed rather than continuous
- Angular shapes reflecting the surrounding field patchwork character are generally the most appropriate
- Avoid sharply defined and dense conifer edges which can create a wall effect
- Use mix of species including some deciduous (larch comes into this category as a deciduous conifer) to create colour and texture variety
- Relatively large forests should be broken by indentations

3.91 For all types of forest, planting should generally be kept back 60 metres from houses and other buildings.

3.92 In planning new forest planting the view from the roadside should be considered in the design. This should be both in terms of allowing filtered views into the forest and in permitting some vistas through the forest to the landscape beyond. The latter is of particular significance where panoramic views and views of notable landmarks are possible.

3.93 Forestry should not be permitted on sites designated as Natural Heritage Areas (NHA), Special Protection Areas (SPA) and Special Areas of Conservation (SAC). These categories of sites include semi-natural woodlands and the only type of woodland, which could potentially be permissible in some circumstances on these sites, would be native woodland.

3.94 Archaeological sites in Ireland are legally protected from unauthorised interference or damage. Known archaeological sites are recorded on the Record of Monuments and Places (RMP) which is continually updated. An appropriate exclusion

zone should be established around known archaeological monuments where no forestry planting or associated activities will be permitted. Other man-made structures which are not formally registered as archaeological monuments, such as old farmhouses, cottages, limekilns, drovers routes, Mass rocks, and townland boundaries should be protected with a minimum exclusion zone of 5 metres width. Stonewalls should also be retained where possible.

3.95 Attention is also drawn to the following other Forest Service Guidelines:

- Forestry and Archaeology
- Forest Biodiversity
- Forest Harvesting and the Environment
- Forestry and Water Quality

Detailed recommendations by character area

3.96 The following detailed recommendations show the type and scale of woodland we consider being appropriate to the relevant landscape character area. The types of woodland are based on the Forest Service classifications for grant making purposes as follows:

- Sitka spruce / lodge pole pine – 100% pure Sitka spruce and/or lodge pole pine coniferous plantations
- Coniferous mixes (10% broadleaf)
  - 20% Diverse plantation – a mixed plantation with 80% or less of Sitka spruce and lodge pole pine
  - Diverse plantation – a plantation or area of conifer species other than Sitka spruce
- Broadleaf mixes
  - Broadleaf – a plantation of pure broadleaf other than oak or beech
  - Oak – an oak plantation either pure or in mixture with conifer with a minimum of 75% oak
  - Beech – a beech plantation either pure or in mixture with conifer with a minimum of 80% beech
- Native woodland – a new Native Woodland Grant Scheme is to be introduced in 2002 to encourage the conservation and establishment of semi-natural woodland habitats, including management operations, natural regeneration, and extensions of existing woodland. There is likely to be a particular focus on the establishment of new native riparian woodland, which may be of relevance to the Shannon and Suck river valleys, and the shorelines of Loughs Derg and Corrib.

3.97 For each landscape character area we have also recommended the scale of woodland appropriate in terms of the maximum size of individual woodlands, and the overall percentage of woodland cover for that part of the county.

### 1. North East Galway (Ballinasloe to Ballymoe)

Nature of woodland appropriate:

- Coniferous mixes (10% broadleaf)
- Broadleaf mixes

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares – Planning requirements resize of woodland in specific areas
- Up to 60% woodland cover

### 2. Shannon and Suck River Valley

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- No maximum limit to individual woodland area
- Up to 20% woodland cover

### 3. East central Galway

Nature of woodland appropriate:

- Coniferous mixes (10% broadleaf)
- Broadleaf mixes

Scale of woodland appropriate:

- For coniferous mixes, individual woodlands of up to 100 hectares
- For broadleaf mixes, no maximum limit to individual woodland area
- Up to 60% woodland cover

### 4. Southeast Galway

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 50% woodland cover

### 5. North East Galway (Tuam environs)

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 30% woodland cover

## 6. Slieve Aughty Mountains

Nature of woodland appropriate:

- Pure Sitka spruce/lodge pole pine (only in limited circumstances where special case is made)
- Coniferous mixes (10% broadleaf)
- Broadleaf mixes

Scale of woodland appropriate:

- Up to 100% woodland cover

## 7. Northwest Lough Derg

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 50 hectares
- Up to 50% woodland cover

## 8. Lower Burren

Nature of woodland appropriate:

- Woodland only appropriate in special circumstances in which case only native woodland to be created

Scale of woodland appropriate:

- Less than 5% woodland cover

## 9. Inveran to Galway City coastline

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 50 hectares
- Up to 20% woodland cover

#### 10. East Connemara Mountains

Nature of woodland appropriate:

- Coniferous mixes (10% broadleaf) – coniferous forestry not appropriate on lough islands
- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 200 hectares
- Up to 50% woodland cover

#### 11. Lough Corrib and environs

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 25 hectares
- Up to 30% woodland cover

#### 12. South foothills of east Connemara Mountains

Nature of woodland appropriate:

- Coniferous mixes (10% broadleaf)
- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 30% woodland cover

#### 13. East Galway Bay

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 50 hectares

- Up to 20% woodland cover

#### 14. West Connemara

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 20% woodland cover

#### 15. Lettermore and Gorumna Islands

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 16. West foothills of east Connemara Mountains

Nature of woodland appropriate:

- Coniferous mixes (10% broadleaf) – coniferous forestry not appropriate on lough islands
- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 50% woodland cover

#### 17. Cashla Bay to Glencoh

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 18. Bertraghboy Bay and eastern banks

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland

which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 19. West Coast (Gorteen Bay to Clifden)

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 20. West Coast (Clifden to mouth of Killary Harbour)

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 21. Killary Harbour and southern banks

Nature of woodland appropriate:

- Native woodland

Scale of woodland appropriate:

- Up to 10% woodland cover

#### 22. Connemara National Park

Nature of woodland appropriate:

- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 20% woodland cover

#### 23. Joyces Country

Nature of woodland appropriate:

- Coniferous mixes (minimum 20% broadleaf<sup>1</sup> [1] ) restrict to below 400m contour and valley bottoms
- Broadleaf mixes
- Native woodland

Scale of woodland appropriate:

- Individual woodlands of up to 100 hectares
- Up to 30% woodland cover
- Woodland

#### 24. Aran Islands

Nature of woodland appropriate:

- Woodland is unlikely to be appropriate here, with the exception of native woodland which may be considered appropriate in certain circumstances

Scale of woodland appropriate:

- Less than 5% woodland cover

#### 25. Lough Rea

Nature of woodland appropriate:

- Broadleaf mixes
- **Native woodland**

Scale of woodland appropriate:

- Individual woodlands of up to 50 hectares
- Up to 20% woodland cover

## Wind farms

3.98 Recommendations on the zoning of wind farms into the three zones i.e. 'Strategic areas', 'Areas for consideration' and 'No go areas' in relation to landscape sensitivity are as described below for each of the prescribed landscape character areas. A description of the zoning terminology is repeated again as follows:

3.99 **Wind farm potential rating- 'Strategic area'**- where wind farm development is considered appropriate i.e. wind resource at or above 6, outside all exclusion zones and in areas of low to high landscape sensitivity i.e. class 1-3.

3.100 **'Areas for consideration'**- where each project would be dealt with on its merits i.e. within perimeter areas of exclusion zones and in areas of special to unique landscape sensitivity i.e. class 3-5

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**3.101 Wind farm potential rating- 'No go areas'**- where wind farms development is considered inappropriate i.e. wind resource at or above 6, inside exclusion zones and in areas of unique landscape sensitivity i.e. class 5.

1. Northeast Galway (Ballinasloe to Ballymoe)

3.102 Poor wind resource

**2. Shannon and Suck River Valley between Portumna and Ballinasloe**

3.103 Poor wind resource

**3. East central Galway (Athenry, Ballinasloe to Portumna)**

3.104 Poor wind resource

**4. Southeast Galway (Clarinbridge to Gort)**

3.105 Poor wind resource

**5. Northeast Galway (Tuam environs).**

3.106 Poor wind resource

**6. Slieve Aughty Mountains Landscape sensitivity principally class 3-high  
Wind farm potential rating for majority of area- 'Strategic areas'**

3.107 Slieve Aughty Mountain area potentially has adequate wind resource for wind farm development and has an acceptable landscape sensitivity class i.e. class 3-high. Views within this area are generally restricted by existing woodland, which would also restrict visibility towards the proposed turbines thus reducing the size of the zone of visual influence. There are no areas of unique sensitivity in the surrounding landscape with high scenic quality therefore visual intrusion of scenic views is unlikely as a result of wind farm development. However mitigation of visual impacts on the slopes of the mountains resulting from infrastructure to the turbines is required to minimise any long distance views.

3.108 There are several small areas with statutory nature designations and it is recommended that wind farms are limited to the zone of 30m from the perimeter of these areas to minimise ecological damage. Additionally a zone of 50m is recommended around forestry. Other restrictions, which may apply, are as listed in

table 2.3 and should be considered in detail with the developer.

## **7. Northwest Lough Derg.**

3.109 Poor wind resource

## **8. Lower Burren (Co. Galway portion). Landscape sensitivity class 4-special and an area of class 2-moderate. Wind farm potential rating- 'Area for consideration' and 'Strategic area'**

3.110 The western section of this area, which is landscape sensitivity class 4-special, has several nature designation i.e. NHA and SAC and is an 'Area for consideration'. The development of wind farms within these areas may only be within the exclusion areas listed in table 2.3.

3.111 The eastern side of this area has no designated land and is a 'Strategic area'. It may be suitable for wind farm development subject to the zone of visual influence and the perceived visual impact caused by the turbines from within the viewpoints of the adjacent Burren National Park. Additionally the undulating nature of the land in the eastern side of this area combined with the existing planting will provide a degree of ground level screening for residential properties in the surrounding area.

## **9. Inveran to Galway City coastline Landscape sensitivity class 3-high with a parallel strip of class 4-special. Wind farm potential rating- 'Area for consideration' and 'Strategic area'**

3.112 The scenic coastal stretch incorporating several Natural Heritage Areas is rated 'Area for consideration' for wind farm development. This is due to the landscape sensitivity rating-class 4'Special'. Within this area it is recommended that wind farms be located only in the 30m perimeter zone around the NHA's. Additionally no wind farms are recommended for the immediate coastal zone i.e. at least 100m above the high tide mark, to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the Galway coast from the coastal road.

3.113 To the immediate north of the road the landscape is rated as a 'Strategic area' where wind farm development is considered appropriate to the landscape setting. The turbines would not intrude upon views of the scenic coast but would be seen against a backdrop to the foothills of the Connemara Mountains.

## **10. East Connemara Mountains (Moycullen, Recess to Glinsk). Landscape sensitivity class 3-high with pockets of class 4-special. Wind farm potential rating- 'Area for consideration' and 'Strategic area'**

3.114 Much of the western part of this area is landscape sensitivity class 4-special due to nature conservation designations i.e. NHA and SAC; these areas are rated as 'Areas for consideration' for wind farm development. In order to protect the environments of

these areas exclusion zones outlined in table 2.3 should apply.

3.115 Outside the nature conservation sites the landscape is zoned as a 'Strategic area' where wind farm development is considered appropriate to the landscape setting.

3.116 Mitigation of visual impacts on the slopes of the mountains resulting from infrastructure to the turbines is required to minimise any long distance views.

**11. Lough Corrib and environs. Landscape sensitivity class 5-unique with pockets of class 4-special and class 3-high. Wind farm potential rating- 'Area for consideration', 'Strategic area' and 'No go area'.**

3.117 Lough Corrib itself is of landscape sensitivity class 5-unique and is valued for its outstanding scenic value. It is also designated as NHA, SAC and SPA and the water body should be excluded from wind farm development. Additionally due to its ecological significance it is recommended that a specific exclusion zone of approx. 50m be established around the immediate lough water edge to protect ecological habitats from the impacts, which may occur during the wind farm construction phase. It is also recommended that development of wind farms be excluded from the area between the lough and the perimeter road to limit visual intrusion for tourists of the lough. As such all land inside the perimeter road be zoned as a 'No go area'.

3.118 The small pocket of land around Knockferry classified as landscape sensitivity 3-special and is zoned as 'Strategic Area' where wind farm development is considered appropriate to the landscape setting. This area is low in scenic value and has no nature conservation designation.

3.119 The area outside the lough perimeter road is zoned as an 'Area for consideration'. This area is of scenic value associated with the lough and the adjacent Connemara Mountains. It is recommended that careful attention is given to establishing a zone of visual influence for any wind farms in this location to note the potential visual intrusion of long distance views from elevated walkways within the Connemara Mountains.

3.120 Note only the western half of the Lough Corrib area has been classified as an area of wind speed resource potential.

**12. South foothills of east Connemara Mountains (west of Salthill to Rossaveel). Landscape sensitivity class 4-special and class 3-high. Wind farm potential rating- 'Area for consideration' and 'Strategic area'.**

3.121 The western section of this area incorporates several Natural Heritage Areas and is rated 'Area for consideration' for wind farm development. This is due to the landscape sensitivity rating-class 4'Special'. Within this area it is recommended that wind farms be located only in the 30m perimeter zone around the NHA's.

3.122 On the eastern side of this area the landscape is rated as a 'Strategic area' where wind farm development is considered appropriate to the landscape setting. From the scenic coast road the turbines would not intrude upon views of the coast but would

be seen against a backdrop to the foothills of the Connemara Mountains to the north.

**13. East Galway Bay (Oranmore to Kinvarra Bay and inland to N18/N67 road). Landscape sensitivity class 3-high with the coastal strip class 4-special. Wind farm potential rating- 'Area for consideration' and 'Strategic area'.**

3.123 The coastal stretch of Galway Bay is a Natural Heritage Area in its entirety. This designation includes areas of the shoreline plus several SPA's and SAC's and is rated 'Area for consideration' for wind farm development. Additionally no wind farms are recommended for the immediate coastal zone i.e. at least 100m above the high tide mark, to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the Galway coast from the coastal road.

3.124 To the immediate east of the road the landscape is rated as a 'Strategic area' where wind farm development is considered appropriate to the landscape setting. The turbines would not intrude upon views of the scenic coast but would be seen against a backdrop to the foothills of the Connemara Mountains.

**14. West Connemara. Landscape sensitivity class 4-special. Wind farm potential rating for majority of area- 'Area for consideration'.**

3.125 This area is almost entirely covered by the NHA nature designation and it is recommended that wind farms be located only in the 30m perimeter zone to minimise impact on the sensitive ecological resource.

**15. Lettermore and Gorumna Islands. Landscape sensitivity class 3-special with the coastal strip class 4-special . Wind farm potential rating- 'Area for consideration' and 'Strategic area'.**

3.126 The landscape is flat, open, rough grass and scrub with frequent rocky outcrops. There are many small scale residential and community developments within this area most with south and west facing views towards Galway Bay. This area is zoned as a 'Strategic Area' for wind farm potential due to its landscape sensitivity classification (class 3-high). Due to the small scale of existing development it is recommended that wind turbines be limited to small clusters to match the intimate scale of the landscape and the nature of existing development within the area. It is also recommended that wind turbines be located on the eastern side of the island to maintain the unimpeded west facing coastal views.

3.127 No wind farms are recommended for an area of 100m above the high tide mark which is zoned as an 'Area for consideration', to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the Galway coast from the coastal road.

**16. West foothills of east Connemara Mountains. (Glenicmurrin Lough environs). Landscape sensitivity class 3-high . Wind farm potential rating- 'Area for consideration' and 'Strategic area'.**

3.128 This is an area of low scenic value but with many nature conservation

designations on the northern and southern sides and is zoned as 'Area for consideration'. It is recommended that wind farms be located only in the 30m perimeter zone to minimise impact on the sensitive ecological resource.

3.129 Outside the above nature designated areas, is zoned as 'Strategic Areas' where wind farm development is considered appropriate to the landscape setting.

**17. Carraroe (Cashla Bay to Glencoh). Landscape sensitivity class 3-high with the coastal strip class 4-special. Wind farm potential rating- 'Area for consideration' and 'Strategic area'.**

3.130 The landscape is scenic, comprising undulating rough grass and scrub. There are many residential and community developments within this area most with south and west facing views towards Lettermore and Gorumna Islands and the Bay beyond. This area excluding the coastal zone is zoned as a 'Strategic Area' for wind farm potential due to its landscape sensitivity classification (class 3-high). Due to the small scale of existing development it is recommended that wind turbines be limited to small clusters to match the intimate scale of the landscape and the nature of existing development within the area.

3.131 No wind farms are recommended for an area of 100m above the high tide mark which is zoned as an 'Area for consideration', to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the Galway coast from the coastal road. Additional it is preferred if wind farms are located to the land side of the coastal road also to maintain uninterrupted coastal views for vehicular traffic.

**18. Bertraghboy bay and eastern banks. Landscape sensitivity class 4 Special. Wind farm potential rating- 'Area for consideration'.**

3.132 There are several nature conservation designations in this area it is classified as an 'Area for consideration'. It is recommended that wind farms be located only in the 30m perimeter zone to minimise impact on the sensitive ecological resource. Additionally no wind farms are recommended for an area of 100m above the high tide mark, to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the highly scenic west coast from the coastal roads (R340 and R342). Additional it is preferred if wind farms are located to the land side of the coastal road also to maintain uninterrupted coastal views for vehicular traffic.

**19. West Coast (Roundstone to Clifden). Landscape sensitivity class 4 Special. Wind farm potential rating- 'Area for consideration'.**

3.133 The landscape from Roundstone to Clifden is low lying, harsh and exposed. There is very little development along this stretch of coastline and this has helped to maintain the high scenic quality and undisturbed views and as such it is classified as an 'Area for consideration'. No wind farms are for an area of 100m above the high tide mark, to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the highly scenic west coast from the coastal road (R341). Additional it is preferred if wind farms are located to the land side of the coastal road also to maintain uninterrupted coastal views for vehicular traffic.

3.134 Additionally there are several nature conservation designations in this area and it is recommended that wind farms be located only in the 30m perimeter zone to minimise impact on the sensitive ecological resource.

**20. West Coast (Clifden to mouth of Killary Harbour). Class 3-High with a coastal edge of Class 4-Special. Wind farm potential rating- 'Area for consideration'.**

3.135 There are several random areas of nature conservation designation in this area and as such it is classified as an 'Area for consideration'. It is recommended that wind farms be located only in the 30m perimeter zone to minimise impact on the sensitive ecological resource.

3.136 No wind farms are recommended for an area of 100m above the high tide mark, to maintain pedestrian access to the shoreline and to minimise intrusion upon the sea backdrop of the highly scenic west coast from the coastal road (N59). Additionally it is preferred if wind farms are located to the land side of the coastal road also to maintain uninterrupted coastal views for vehicular traffic.

**21. Killary Harbour and southern banks. Landscape sensitivity class 5 Unique. Wind farm potential rating- 'No go area'.**

3.137 In addition to the nature conservation designations of this area i.e. NHA, the water edge is highly scenic and therefore is highly sensitive to development of any kind. Wind farms development is considered inappropriate to the landscape character of this area.

**22. Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough). Landscape sensitivity class 5 Unique. Wind farm potential rating- 'Area for consideration' and 'No go areas'**

3.138 This area is highly scenic in particular within the National Park and is therefore highly sensitive to development. Due to the unique combination of statutory nature designations, outstanding scenic qualities and high cultural value of the National Park it is recommended as a 'No go area' for wind farm development.

3.139 Outside the National Park wind farm potential rating is 'Area for consideration' and development is subject to the restrictions of the exclusion zones in table 2.3. Additionally due to the overall unique sensitivity of the landscape within this area infrastructure for the wind farms should be limited to a distance of say 200-300m from an existing road. Also the visual influence of any wind farm development should not impact significantly on views from the National park. Strict visual mitigation measures are required within this area.

**23. Joyces Country (including Lehanagh Loughs and south Lough Mask). Landscape sensitivity class 5 Unique with road corridors of class 4-Special. Wind farm potential rating- 'Area for consideration'.**

3.140 In this area wind farm potential rating is 'Area for consideration' and development is subject to the restrictions of the exclusion zones in table 2.3. Additionally due to the overall unique sensitivity of the landscape within this area infrastructure for the wind farms should be limited to a distance of say 200-300m from an existing road. Also the visual influence of any wind farm development should not impact significantly on views from the National park and as such are more appropriate

on the eastern side of the area. Strict visual mitigation measures are required within this area.

**24. Aran Islands. Landscape sensitivity class 5-Unique. Wind farm potential rating- 'Area for consideration' and 'No go areas'.**

3.141 The landscape of the Aran Islands is flat, open and highly scenic. The northeast-facing coast slopes gently down to the water edge and is visible from the mainland on Galway Bay. Development has already occurred along this northeastern side of the island and the landscape is not quite as dramatic and unique as the rugged coastline on the western side. Additionally there are stretches of the northeastern coast, which have no nature conservation designations, therefore no ecological damage would occur as a result of wind farm development.

3.142 The northeastern section of the island is classified as an 'Area for consideration' and it is recommended that wind farm development be restricted to the northeastern side of the island.

3.143 The southwestern section is classified as a 'No go area' in order to minimise disruption to the relatively undisturbed and unique landscape elements all of which are classified as nature conservation sites.

**25. Lough Rea. Landscape sensitivity class 4 Special. Wind farm potential rating- 'Area for consideration'.**

3.144 The landscape surrounding Lough Rea is flat; vegetation encloses the water body and has created an intimate setting. Development of wind farms should be in small clusters in keeping with the intimate scale of the landscape. There is a nature conservation area i.e. NHA, along the south west of the Lough and wind farm development should be as recommended in table 2.3 for exclusion zones, additionally the turbines should be set back approximately 50m from the water edge to protect the aquatic habitats.

Table **Error! Style not defined..Error! Bookmark not defined.** – Landscape Values:

Note - \* refers to areas with pockets of varying landscape value rating (see Figure 2 Landscape values)

LANDSCAPE CHARACTER AREA	LANDSCAPE VALUES: CULTURAL	LANDSCAPE VALUES: SOCIO ECONOMIC	LANDSCAPE VALUES: ENVIRONMENTAL	LANDSCAPE VALUES: TOTAL RATING
1 North east Galway (Balinasloe to Ballymoe)	Low	Low	Low	Low
2 Shannon and	Medium	Medium-High	Medium	Medium

	Suck River Valley between Portumna and Ballinasloe				
3	East central Galway (Athenry, Ballinasloe to Portumna)	Low	Low	Low	Low
4	Southeast Galway (Clarinbridge to Gort)	Medium	Medium	Medium	Medium
5	Northeast Galway (Tuam environs)	Low	Low	Low	Low
6	Slieve Aughty Mountains	Medium	Medium-High	Medium	Medium
7	Northwest Lough Derg	Medium	Medium-High	Medium	Medium
8	Lower Burren (Co. Galway portion)	Outstanding	Outstanding	Outstanding	Outstanding
9	Inveran to Galway City coastline	High	High	High	High
10	East Connemara Mountains (Moycullen, Oughterard to Loughanillaun)	High	High	High	High
11	Lough Corrib and environs	Outstanding	High - outstanding	High -outstanding	<b>Outstanding</b>
12	South foothills of east Connemara Mountains (Ouranavilla Tully to Tonabrocky)	Medium	Low-Medium	High	Medium *
13	East Galway Bay (Oranmore to Kinvarra Bay and inland to N18 road)	High	High	High	High
14	West Connemara	Outstanding	Outstanding	Outstanding	Outstanding
15	Lettermore	High	High	High	High



	and Gorumna Islands				
16	West foothills of east Connemara Mountains	High	High	High	High
17	Carraroe (Cashla Bay to Glencoh)	High	High	High	High
18	Bertraghboy bay and eastern banks	High	High	High	High
19	West Coast (Gorteen bay to Clifden).	Outstanding	Outstanding	Outstanding	Outstanding
20	West Coast (Clifden to mouth of Killary Harbour)	Outstanding	Outstanding	Outstanding	Outstanding
21	Killary Harbour and southern banks	Outstanding	Outstanding	Outstanding	Outstanding
22	Connemara National Park (including Lough Fee, Lough Inagh and Derryclare Lough)	Outstanding	Outstanding	Outstanding	Outstanding
23	Joyces Country (including Lehanagh Loughs and south Lough Mask)	Outstanding	Outstanding	Outstanding	Outstanding
24	Aran Islands	Outstanding	Outstanding	Outstanding	Outstanding
25	Lough Rea	High	High	High	High

