Foreword

North Lincolnshire Council is supportive of the need to reduce the dependence on fossil fuels to reduce the impacts of climate change and global warming. The Council is prepared to play its part in the region in meeting renewable energy targets. However, the district has seen unprecedented levels of windfarm proposals – far greater than elsewhere in the Yorkshire and Humber region. Proposed schemes in 2003/4 alone exceed the entire Humber sub-regional renewable energy target for 2010. To make matters worse, most of these schemes are concentrated in one small area of the district and appear to take no account of neighbouring proposals both within and adjacent to North Lincolnshire. The size and number of these proposals has caused fear and concern amongst residents and this has locally undermined the effort to ensure that more energy is delivered from renewable sources.

In December 2003, the Council became so concerned at this unplanned free for all for windfarm developments that it unanimously passed the following resolution to complement the adopted Local Plan policy for renewable energy.

The council is generally supportive of renewable energy

- When considering a planning application for a windfarm due regard will be given to the visual, environmental, landscape and community impact of the scheme.

- When considering applications the council will also note and have regard to the cumulative impact of the proposed scheme and any existing windfarms located in the area.

- Where the council is minded to object to applications to be determined by the Secretary of State the council will call for a public inquiry.

North Lincolnshire is a predominantly rural landscape of great diversity, beauty and character. The mainly lowland and undulating landscape provides an attractive setting for tourism, business and residents essential for the future prosperity of the area. Wind energy developments must have regard to the environmental capacity of North Lincolnshire and the cumulative impact of schemes in the area. The Council is committed to meeting its share of the Yorkshire and Humber renewable energy target but equally committed to ensuring that wind developments are well planned and take account of their impact on communities and the environment. The Wind Energy Development SPG seeks to ensure that wind energy development is sustainable in North Lincolnshire and that all impacts on communities and the environment are properly considered.

Councillor Liz Redfern

Acting Leader of the Council

Introduction

1.1 The need to address climate change and global warming is one of the key challenges facing the planning system. The burning of fossil fuels for energy is a major contributor to greenhouse gas emissions. At the same time the demand for energy grows whilst many traditional forms of fossil fuels are declining, particularly oil, gas and coal. This makes the need to find cleaner, more secure, more diverse forms of energy vital if we are to continue to ensure prosperous and sustainable communities and a healthy environment.

1.2 The Government has set targets to generate 10% of UK electricity from renewable energy sources by 2010 followed by 15% by 2015 and 20% by 2020 as well as to cut carbon dioxide emissions by 60% by 2050. To achieve this Planning Policy Statement (PPS22 Renewable Energy) has been published which requires the planning system to actively promote renewable energy development. PPS22 also provides detailed guidance for the consideration of renewable energy planning applications. Since the publication of PPS22. Regional Planning Guidance for Yorkshire and the Humber has set challenging new renewable energy targets for the Humber and other sub-regions. The 2010 target for the Humber (including North Lincolnshire, North East Lincolnshire, Kingston upon Hull and East Riding councils) has been set at 146MW.

1.3 Renewable energy includes wind, water, biomass and solar energy. This guidance deals solely with wind energy, as it is a major planning issue in North Lincolnshire. Wind energy in particular is expected to play an increasingly important role in Britain, which is one of the windiest countries in Europe. Wind technology has advanced significantly in recent years as larger more efficient and energy dense turbines have developed. This means that wind turbines no longer need to be restricted to the windiest upland areas but can also be located in many lowland areas like North Lincolnshire that have lower wind speeds. Although wind developers tend to favour locations close to the national grid less 'optimal' locations are also capable of accommodating such development. Greater areas of the country and more local authorities are therefore able to accommodate wind energy proposals and play a role in this form of renewable energy. Given the ever increasing size of wind turbines and the potential for much greater impacts on communities and the environment it is vital that all local authorities contribute to promoting wind and other forms of renewable energy development.

1.4 At October 2004, planning applications and applications to the Department of Trade and Industry (DTI) under section 36 of the Electricity Act (for all proposals greater than 50MW) for wind turbines now significantly exceed the entire Humber sub-regional Renewable Energy target for 2010. North Lincolnshire has a number of 132kV power lines that cross the district serving gas power stations providing access to the national grid. The district has a mostly flat lowland landscape that is not afforded any national landscape designation or protection from such developments unlike large areas of Yorkshire. These factors together with greater encouragement for wind energy has led to the district receiving disproportionately high numbers of wind development proposals mostly in one small part of the district. This has resulted in an over concentration of wind proposals in North Lincolnshire and a failure to take account of their cumulative impact on communities and the environment.

1.5 North Lincolnshire has a diverse range of locally important landscapes and is located adjacent to the major bird migratory route of the River Humber of which large areas are identified as international and nationally important ecological sites. The district also accommodates a large rural population in its market towns, villages and rural hamlets. It is vital for the future of renewable energy that wind turbine developments do not occur in an unplanned 'free for all'. This guidance has been produced to ensure that wind energy development takes place in a planned and controlled way that balances its need with that of the environment and communities of North Lincolnshire. This guidance together with a study into renewable energy targets currently being progressed by the Yorkshire and Humber Assembly will also inform the policy preparation in the future new Local Development Framework required by the Planning and Compulsory Purchase Act (July 2004).

Policy Context

National Planning Policy

2.1 The Government's objectives are also set out in the Energy White Paper, Our Energy Future - Creating a Low Carbon Economy (DTI, 2003). This aims to cut UK carbon dioxide (CO^2) emissions by 60% by 2050 with real progress by 2020, and to maintain reliable and competitive energy supplies. Renewable energy is likely to make a considerable contribution to these aims and is crucial in meeting sustainable development objectives.

2.2 The Government has set an aspiration in the Energy White Paper to increase renewable energy production to 20% by 2020. The White Paper includes policies to stimulate the development of new technologies to provide the basis for continuing growth of renewables in the longer term, to assist the UK renewable energy industry to become competitive in home and export markets and in doing so, provide employment. The Government has set renewable energy targets for each of the English regions.

2.3 The Government's planning policy on renewable energy is set out in Planning Policy Statement (PPS) 22: Renewable Energy. and its associated companion guide Planning for Renewable Energy - Companion Guide to PPS22. PPS22 emphasises the Government's support for renewable energy developments and calls for a positive approach to their planning. It requires regional planning bodies to set regional targets which should be derived from assessments of the region's renewable energy potential. The issues which local planning authorities are permitted to take into account when considering planning applications for renewable energy developments are set out below.

Issues for consideration

- Visual effects
- Cumulative impact
- Noise
- Amenity impacts
- Landscape impacts
- Nature conservation and ecology interests
- Archaeology & the built environment

2.4 In relation to the regional targets PPS22 states that regional renewable energy targets are, in future, to be expressed as a minimum amount to be achieved and that targets will be revised upwards if they are met.

2.5 With regard to proposals for wind farms, it should be noted that

under section 36 of the Electricity Act proposals for wind farms which generate more than 50 MW of electricity are determined by the Secretary of State for Trade and Industry. The Council will be consulted on its views. This SPG will help to formulate the Council's response to such proposals.

Regional Planning Policy

2.6 As mentioned above, the Government has set a renewable energy target for the Yorkshire and Humber region. The Government Office for Yorkshire and the Humber (GOYH) commissioned AEA Technology and Terence O'Rourke in 2001 to undertake an assessment of renewable energy potential, targets for renewable energy across Yorkshire and the Humber and an action plan for implementation. The study took into account local constraints whilst developing targets. This will provide the framework for local authorities in the region to promote renewable energy policies to meet targets and develop robust development control policies that also take account of local opportunities and constraints. Further work has set indicative targets at the local authority level and the Council will adopt those targets as its contribution towards wind energy development within the region. Should North Lincolnshire meet its 2010 renewable energy target early the Council will review the need for increasing this target in further guidance. Any future targets will take account of the most appropriate and suitable forms of renewable energy available and have regard to the progress that other local authorities have made in reaching their targets within the region.

2.7 Currently 1.5% of the electricity consumed in the region is generated by renewable sources. It is suggested that by 2010 at least 9.4% and by 2021, 22.5% of the region's electricity could be from renewable sources. Table 1 (below) provides an indicative breakdown of the regional renewable energy targets to 2010 and 2021.

Table 1: Renewable Energy Targets for the Yorkshire and Humber Region

Renewable Energy Type	Prospective Total Capacity by 2010 (MW - megawatts)	Prospective Total Capacity by 2021 (MW - megawatts)
Wind	465	1139
Biomass	189	397
Solar Photovoltaic	16	155
Hydro	3	5
Wave	N/A	153
Total	673	1849

2.8 Regional Planning Guidance (RPG) for Yorkshire and the Humber broadly encourages proposals for the use of renewable energy sources. Currently sections of the document are under review. In relation to renewable energy, the draft review sets out targets for the 4 sub-regions of Yorkshire and the Humber. These are set out in Table 2 (below)

Table 2: Sub-Regional Targets for Renewable Energy

Sub-region	Target (MW - megawatts)
Humber	146
North Yorkshire	194
South Yorkshire	100
West Yorkshire	74
Offshore	160

Further work has been undertaken at the regional and sub-regional level, which has resulted in renewable energy targets being developed for each local authority in the Humber area. Table 3 (below) sets out the wind energy targets for the Humber local authorities for 2010 and 2021. The Council accepts these targets as being extremely challenging but achievable. North Lincolnshire makes up only 7.5% of the region's land mass but has been apportioned more than 12% of the regional wind energy target for 2021. A key theme of regional planning guidance is "advancing together". The Council is keen to ensure that all districts within the region contribute towards meeting their targets and prevent an over concentration of such development in North Lincolnshire. On meeting its target for 2010, the Council will take account of progress that the rest of region has made before considering further applications to meet its 2021 targets. Table 3 (below) shows wind energy targets for the Humber sub-region local authorities for 2010 and 2021.

Table 3: Wind Energy Targets for Humber Local Authorities.

Local Authority	Target (MW - megawatts)	
	2010	2121
East Riding of Yorkshire	40	120
City of Kingston upon Hull	5	15
North Lincolnshire	40	100
North East Lincolnshire	23	38

WIND1: The target for energy to be generated from renewable resources for the Humber sub-region is at least 146MW for 2010. North Lincolnshire's target to meet its contribution from wind energy development is 40MW for 2010 and a further 100MW for 2021.

Proposals for wind energy development to meet these targets must:

i) minimise the visual and physical impacts of wind energy developments on the surrounding area

ii) minimise the cumulative impact on the area of other existing, and permitted wind developments as well as those which are the subject of submitted planning applications;

iii) minimise the impact of the proposed development on the landscape

iv) minimise the ecological impact of any development.

The Council will review its 2010 target when met whilst having regard to progress elsewhere in Yorkshire and the Humber.

North Lincolnshire Local Plan

2.9 The North Lincolnshire Local Plan aims to provide guidance and incentives to promote the expansion of the exploitation of renewable energy sources in North Lincolnshire. Policy DS21: Renewable Energy (below) provides the basis for the consideration of proposals for renewable energy developments. Other policies relating to protection of the landscape and landscape designations are often relevant to such proposals.

DS21 - Renewable Energy

Proposals for the generation of energy from renewable resources will be permitted provided that:

i) any detrimental effect on features and interests of acknowledged importance, including local character and amenity, is outweighed by environmental benefits; and

ii) proposals include details of associated developments including access roads and other ancillary buildings and their likely impact upon the environment.

Where appropriate, conditions will be imposed requiring the restoration of the site to its original condition or the implementation of an agreed scheme of after-use and restoration.

Wind Power

3.1 Wind power, in the form of wind turbines, is now a well-established and accepted commercial source of renewable electricity generation. As the most technologically and economically advanced of the renewable energy technologies, wind energy is the most prevalent. The United Kingdom as one of the windiest climates in Europe is well placed to produce electricity from wind power. In Yorkshire and the Humber region, the Renewable Energy Assessment and Targets (REAT) study identified onshore wind energy development as an important source of renewable energy.

The Technology

3.2 The level of electricity that a wind turbine produces is dependent on the wind speed and the area swept by the rotor blades. A wind turbine consists of a steel tower which supports the housing for the mechanical machinery and the "yaw mechanism" which allows the machine to turn itself towards the prevailing wind. A turbine can have a varying number of blades. There are essentially two types of wind turbine, vertical and horizontal axis machines. Within each type there are various technical differences such as the number of blades.

3.3 In recent years wind turbine technology has continued to advance significantly. Larger wind turbines which are more energy dense are being deployed and are capable of operating at lower average mean wind speeds (AMWS). This has increased the area of potential future deployment across Yorkshire and the Humber. This will help to meet national and regional targets for renewable energy generation. However, this advance in technology will mean there is a greater impact on the landscape.

Planning Implications

WIND2: The key issues that North Lincolnshire Council will assess in relation to planning applications for wind energy developments are:

- **Visual Effects;**
- **Cumulative Impact;**
- **Noise;**
- **Amenity impacts**
- **Landscape impact;**
- **Nature Conservation And Ecology Interests**
- **Archaeology & the built environment**

3.4 Issues relating to the impact of wind turbines on radar and aircraft, separation distances from powerlines, roads and railways are not the responsibility of the Local Planning Authority. Developers are required to address these issues taking account of Civil Aviation Authority and Ministry of Defence guidance in relation to radar and the legislative requirements on separation distances, before planning applications are submitted. Such matters should be addressed where appropriate in any required Environmental Impact Assessment.

Visual Effects

3.5 Turbines in wind farms are likely to be tall, frequently located in open land and therefore likely to be highly visible. Domestic wind turbines are likely to be smaller and it will normally be realistic to seek to conceal them. Developers are encouraged to ensure that the visual impacts are minimised and appropriate to the location of the wind farm development. In the case of North Lincolnshire, in particular the Trent Floodplain area, the landscape is fairly flat and uniform therefore the visual impact of wind energy development will be substantial.

3.6 The visual effect of a wind farm will be dependent on:

- the distance over it may be viewed;
- whether the turbines can be viewed adjacent to other features;
- different weather conditions,
- the design and layout of the development; and
- the landscape and nature of the visibility.

The following is a general guide to the effect distance has on the perception of the development in an open landscape. However, it should be noted that the each proposal and the associated visual effects will be treated on its own merits when being assessed against this guidance and other planning policy.

Table 4: General Perception of a Wind Farm in an Open Landscape.

Distance	Perception
Up to 2kms	Likely to be a prominent feature
2 to 5kms	Relatively prominent
5 to 15kms	Only prominent in clear visibility - seen as part of the wider landscape
15 to 30kms	Only seen in very clear visibility - a minor element in the landscape.

Source: Scottish Executive (2002), Planning Advice Note (PAN) 45: Renewable Energy Technologies, SEDD, Edinburgh

3.7 The visual impact will be affected by their siting and layout in relation to local land form and landscape characteristics, and the qualities of the specific site, as well as by the size and number of turbines. Different

layouts will be appropriate in different circumstances. For example, grouped turbines can normally appear acceptable as a single, isolated feature in an open, undeveloped landscape, while rows of turbines may be more appropriate in an agricultural landscape with formal field boundaries. Although wind farms may be complex, they should not appear confusing in relation to the character of the landscape. Ideally they should be separate from surrounding features to create a simple image. The design of each development must be appropriate to its site.

3.8 The style and colour of turbines may also be relevant. Experience suggests that solid towers appear less complex than lattice and tapering towers are generally regarded as being more elegant than cylindrical. In terms of colour, white or off-white is generally preferred, but other colours may be acceptable in appropriate circumstances. A semi-matt surface is required to reduce the reflection of light. However, colour choice can not be a substitute for good siting and design.

3.9 Ancillary elements also need to be fully addressed, as their impact can often be as significant as those of the turbines. Access tracks should be routed and designed to minimise both visual and habitat impacts. This can be minimised by careful route selection, which takes account of layout and appropriate surfacing material together with the impact of cuttings, embankments and drainage channels. Managing problems of erosion and providing for reinstatement and enhancement of vegetation along the track is essential. Powerlines, fencing, buildings and anemometer masts should be located and designed in ways that minimise clutter.

3.10 It must also be noted that the wind farms will only have a certain design life. When a wind farm reaches the end of its design life, the turbines should be removed as soon as possible following cessation of operations together with any ancillary activities and the site restored to a suitable standard which should be agreed with the Council.

WIND3: North Lincolnshire Council will consider the following matters when assessing the visual impact of wind energy proposals:

- **Distance from which it can be seen**
- **Landscape Characteristics**
- **Siting and Layout**
- **Design of the turbine**
- **Impact of ancillary elements**
- **Potential after use of wind farm site.**

Cumulative Effects

3.11 The cumulative effects of wind energy development may be assessed either in the context of a site specific Environmental Assessment (EA) or as part of a Strategic Environmental Assessment (SEA). Over recent years there has been a growing awareness of the potential for cumulative effects arising from wind energy developments. With the extension of existing wind energy developments and proposals for new development in proximity to existing sites, their combined effects should be fully taken into account.

3.12 The cumulative effects of wind energy development can arise as the combined consequences of:

- An existing wind energy development and a proposed

extension to that development;

- Proposals for more than one wind energy development within an area;
- Proposals) for new wind energy developments) in an area with one or more existing development(s);
- Any combination of the above.

In North Lincolnshire, in particular given the number of wind farms proposed both locally and nearby, the cumulative impact of wind energy developments is a relevant consideration in assessing planning applications or providing views to the Secretary of State for Trade and Industry for those applications greater than 50MW.

3.13 The cumulative impact of wind energy proposals must be fully taken account of and minimised. Developers should consider examining the impact that wind farm development will have on the zone of visibility (i.e. the area from which it will be seen) e.g. the surrounding 15kms (see Table 3). This is particularly important where zones of visibility of proposals for wind energy development overlap, such is the case in North Lincolnshire and the surrounding area, with existing wind farms, and those which benefit from planning permission. In this context, it will also be important to ensure that the cumulative impact of any development ancillary to the wind farm(s) such as plant rooms, car parking and storage is minimised.

3.14 The nature and character of the location, and the landscape in which a development is located, will in part determine the acceptability or otherwise of siting proposals in proximity to each other. Further advice is available in A Guide to Assessing the Cumulative Effects of Wind Energy Development

WIND4: North Lincolnshire Council will consider the following matters when assessing the cumulative impact of wind energy proposals:

- **The proximity of existing, and permitted wind energy developments which are the subject of submitted planning applications;**
- **The impact on the surrounding zone of visibility**
- **The impact of development ancillary to the development**
- **The nature, character and landscape of the location in which the proposal is sited**
- **The impact on nature conservation and ecology interests**
- **The impact of noise**

Noise

3.15 The generation of noise from wind turbines is the subject of much discussion and concern. Well-designed wind turbines are generally quiet in their operation. There are two distinct noise sources which are associated with wind turbines:

- The mechanical noise produced by the gearbox, generator and other parts of the drive train; and
- The aerodynamic noise produced by the passage of the blades through the air.

3.16 Topography and local environmental conditions can also have an effect on any noise produce by wind farms. Wind generated background noise increases with wind speed, at a faster rate than turbine noise does. The difference between wind farm noise

and background noise is liable to be greatest when wind speeds are low. In modern wind turbines, it is possible reduce noise by varying the speed of the turbine depending on the wind conditions set out previously.

3.17 The ETSU report "The Assessment and Rating of Noise from Windfarms" should be used to assess and rate noise from wind energy development. It sets out a framework for the measurement of wind farm noise and gives indicative noise levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to costs and administrative burdens on wind farm developers or the planning authority. The report provides a series of recommendations that can be regarded as relevant guidance on good practice.

WIND5: In assessing the implications of noise from wind energy development, developers and the Council should have regard to:

- **Proximity of settlements and buildings**
- **The framework for assessing noise set out in the ETSU report**
- **The topography and local environmental conditions surrounding the proposed development**

Amenity Impacts

3.18 The proposed siting of wind, and other forms of renewable energy, can sometimes cause concern among local residents. Particular concerns often relate to noise and visual impact. Research has indicated that concerns tend to ease when a development is in place. Providing that any potential unacceptable impacts, including those impacts on residential and local amenity, can be mitigated satisfactorily, this need not in itself prevent development. However, it is important that detailed proposals for wind energy development, including access arrangements, address issues of residential and local amenity and ensures that by careful location and sensitive design and in the standards of operations, amenity is not subject to adverse effects.

3.19 It is crucial therefore that wind energy developers liaise closely with the Council and with local residents about their proposals and their likely impacts in order to allay any fears and/or take any relevant actions to mitigate their effects.

WIND6: In siting wind energy developments, developers should consider the following:

- **Minimising disturbance to residential amenity by means of noise, shadow flicker, visual and cumulative impacts**
- **How the proposed development will be accessed for construction, servicing and maintenance purposes and how any disturbance can be mitigated;**
- **The impact on informal recreation sites and public rights of way; and**
- **Liaising closely with local communities regarding the impact of the development**

3.20 It should be noted that, under PPS22, the Council cannot consider separation distances from powerlines, roads and railways. It is the responsibility of developers to address any potential

taking into account the legislative requirements on separation distances, before submitting a planning application.

Landscape Impacts

3.21 North Lincolnshire has a high quality natural environment and the protection and enhancement of these assets is fundamental to sustainable development and to improving the quality of life for both residents and visitors to the area. The quality of the natural environment is reflected in the variety of landscapes which characterise the area.

3.22 The North Lincolnshire Landscape Character Assessment identifies six basic landscape types ranging from the flat, low lying warpland of the Trent Floodplain, through the escarpment of the Lincoln Edge, the Ancholme Valley, the Lincolnshire Wolds and the gently undulating Lincolnshire Drift to the estuarial lowlands of the Humber. These areas comprise predominantly arable land interspersed with a number of woodland and wetland areas and scattered hedgerows. Significant changes to the landscape have resulted following the extraction of minerals where semi-natural landscapes, such as Barton Clay Pits and the Ironstone Gullets, have been created and also from the development of large scale industry such as at Killingholme at the mouth of the Humber estuary.

3.23 In order to minimise wind speed variations; commercial wind farms need to be situated in areas which have a relatively smooth and rounded relief. They also require access to the National Grid. The current generation of wind turbines are capable of operating at lower wind speeds, which means that more areas are seen as being capable of accommodating wind energy development. Therefore, increasing numbers of proposals are coming forward. As previously mentioned North Lincolnshire and the surrounding local authority areas are subject to a very large number of these proposals.

3.24 North Lincolnshire's landscape and availability of 132kV power lines makes certain areas highly attractive for wind energy development. There are no landscapes in the area into which a wind farm could easily blend or that would not introduce a new and distinctive feature. It is vital therefore that their siting does not have a significantly detrimental impact on the landscape.

3.25 The capacity of the landscape to accommodate wind energy development depends on the following considerations:

- The degree of impact the development will have on the existing character of the landscape;
- The extent to which its impact can be modified and reduced by design and;
- The number and size of wind energy developments within any landscape character area and their cumulative effect upon it

3.26 There are a number of designated areas within North Lincolnshire which relate to the preservation and enhancement of the landscape and the conservation of the area's natural environment (see Figure 1). This does not suggest that such areas cannot on these grounds alone be utilised for the construction of wind energy developments but account needs to be taken of these areas when considering applications and providing comments to the Secretary of State for Trade & Industry.

3.27 As set out in paragraph 3.2, North

Lincolnshire has 6 landscape character areas – the Trent Levels, the Lincolnshire Edge, the Ancholme Valley, the Lincolnshire Wolds, the Lincolnshire Drift and the Humber Estuary. These areas are split into 33 separate local landscape types. The Council has produced supplementary planning guidance relating to landscape character assessment and a countryside design summary, which must be taken into account by developers when formulating their proposals and will be taken into account by the Council when determining planning applications for, or providing comments on, wind energy development in North Lincolnshire.

WIND7: In assessing the landscape impacts of wind energy development, the Council will consider the following matters:

- **Ability of the landscape to accommodate the development**
- **Impact of areas of landscape protection and enhancement, and nature conservation importance**

Developers should also provide an assessment of their proposals against the Council's approved Supplementary Planning Guidance on Landscape Character Assessment and Guidelines, and Countryside Design Summary.

Proposals for wind energy development must also comply with relevant Landscape and Conservation policies in the North Lincolnshire Local Plan.

Nature Conservation and Ecology Impacts

WIND 8: In assessing the implications for ecology and nature conservation for wind energy development North Lincolnshire Council will assess the following issues:

- **Effect on designated sites for nature conservation**
- **Effect on protected species of plants and animals**
- **Effect on cited bird species from designated sites feeding or roosting in areas adjacent or inland**
- **Effect on migratory routes for birds especially large less manoeuvrable birds such as swans and geese**
- **Assessment of cumulative affects in relation to other wind farms and other developments**
- **Effects on nesting birds especially during construction**
- **Adequacy of mitigation measures**

3.28 North Lincolnshire contains many designated nature conservation sites that are required by law to be protected. These range from the internationally important areas of the Humber Estuary and Crowle and Hatfield (part of) Moors, through nationally and regionally important wildlife sites of particular importance (for example Messingham Sand Quarry and Humber Estuary SSSI's) and to sites of local importance. The remainder of Hatfield Moor and all of Thorne Moor are located outside of North Lincolnshire, adjacent the border with Doncaster MBC and are also

recognised as internationally important nature conservation areas. All these sites are identified in figure 1. Where wind turbine development is proposed, their development should not adversely affect the conservation objectives and/or reasons for identification and notification or designation of sites of national wildlife importance, including indirect effects from outside a designated site.

3.29 There should not be an adverse effect on features of acknowledged importance, on or surrounding any development site, including species of plants and animals of nature conservation value. Of particular importance are the effects on such species protected by schedules 1, 5, 8 and 9 of the Wildlife and Countryside Act 1981. These schedules of the 1981 Act protect all wild birds, their nests and eggs. The Countryside Rights of Way Act strengthens this protection further by introducing offences of reckless disturbance, reckless damage, destruction or obstruction to a place used by a protected species.

3.30 Cited bird species that use the designated conservation sites may feed or roost in areas adjacent to the Special Protection Areas (SPA's). Indirect effects on species for which the site has been designated should therefore be assessed. The developer should provide information for this assessment.

3.31 Article 4 of the European Birds Directive requires that, outside SPA's, Member States strive to avoid pollution or deterioration of habitats of all wild birds, including species listed in Annex 1 of the Directive and important concentrations of regularly occurring migratory species. To minimise the potential for adverse affects on birds (that is all wild birds, including species listed at Annex 1 of the Directive), including the risk of collisions, wind turbine developers should assess the following in relation to the North Lincolnshire area:

- Potential effects on known bird migration routes
- Local flight paths
- Foraging areas
- Coastal and inland wetland sites
- The potential sensitivities of ridges and valleys, where large numbers of birds may concentrate

3.32 Collision risk and mortality in relation to wind turbines, associated structures and overhead power lines will need to be assessed by the proposed developers. The assessment should include the cumulative affect of all wind energy projects that have been developed, or have been planned for the area surrounding the proposed wind turbine development.

3.33 Monitoring and mitigation of wind farm development that receive consent in relation to nature conservation is considered to be an important issue as it is not always possible to pre-judge all the impacts of a wind energy development. Monitoring programmes should;

- Cover a sufficient time period to provide a sound baseline and control data
- Address the full range of environmental impacts
- Include a process to review the results from the programme and implement immediate remedial action as required.

The need for, and scale of, any monitoring programme must be determined on a project by project basis and should be focused on the issues relevant to any particular wind

energy development.

Archaeology and the historic environment

3.34 North Lincolnshire has a range of archaeological features and a high quality built environment. Therefore, developers are expected to provide appropriate information addressing issues of archaeology and culture heritage including the impacts, both during and after construction, on Scheduled Ancient Monuments, Listed Buildings and Conservation Areas. They should consult the Council's Sites and Monuments Record at an early stage when formulating their proposals for wind energy development. This will allow the Council and potential developers to discuss an appropriate archaeological assessment and potential requirements for field evaluation

WIND9: Developers should consider the impact of their proposals for wind energy development, both during and after construction, on archaeology and cultural heritage, and the historic landscape, including designated Conservation Areas, Scheduled Ancient Monuments and Listed Buildings, and other non-designated sites and remains.

Developers will need to demonstrate that the objectives of the designation of the area will not be compromised by the development, and that any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits.

Impacts which cannot be considered

3.35 There are number of other issues which the Council cannot consider when assessing proposals for wind energy development. The Council must be satisfied that these issues have been addressed prior to any planning applications being considered. These are:

Aircraft, Radar and Airport Operation – developers should contact the Ministry of Defence, Civil Aviation Authority, appropriate airport/aerodrome operators and the Department for Transport. They should take into consideration the appropriate guidance produced by the above agencies. Humberside International Airport, Doncaster Finningley Airport and Ministry of Defence considerations (including Low Flying Areas). It must be noted, however, that aviation, radar and airport operation falls outside the remit of the planning system and under the jurisdiction of the Civil Aviation Authority and the Ministry of Defence. Developers are advised to look at Wind Energy and Aviation Interests document and Circular 1/2003: Safeguarding Aerodromes, Technical Sites and Military Explosive Areas .

Separation distances from powerlines, roads and railways – developers should take into account the legislative requirements on separation distances prior to submitting a planning application.

Electromagnetic Interference & Telecommunications – developers should consider the impact of their wind energy development proposals on these matters and should consult with the appropriate bodies and companies.

Key contacts for the above are set out in Appendix 2

North Lincolnshire Council Contacts

Planning & Regeneration Service
Church Square House
PO Box 42
Scunthorpe
North Lincolnshire
DN15 6XQ

Development Plans

Marcus Walker, Development Plans Team Manager
(01724) 297307

Iain Cunningham, Senior Planning Officer (01724) 297577

Development Control

William Hill, Principal Development Control Officer (01724) 297482

Further Reading

AEA Technology & Terence O'Rourke PLC (2002), Development of a Renewable Energy Assessment and Targets for Yorkshire and the Humber – Final Report to Government Office for Yorkshire and the Humber, AEAT, Didcot

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Appendix 1: Nature Conservation Sites

National Nature Reserve

- Humberhead Peatlands

Ramsar Site

- Humber Flats and Marshes & Coast – Phase 1

Special Protection Areas

- Humber Estuary
- Thorne & Hatfield Moors

Special Areas of Conservation

- Hatfield Moor
- Thorne Moor

Sites of Special Scientific Interest

- Haxey Grange Fen
- Epworth Turbury
- Eastoft Meadow
- Haxey Turbury
- North Killingholme Haven Pits
- Conesby (Yorkshire East) Quarry
- Thorne, Crowle and Goole Moors
- Hatfield Chase Ditches
- Cleatham Quarry
- Messingham Sand Quarry
- Belshaw
- Rush Furlong
- South Ferriby Chalk Pit
- Risby Warren
- Wrawby Moor
- Castlethorpe Tufas
- Humber Estuary
- Broughton Alder Wood
- Misson Training Area
- Messingham Heath
- Manton & Twigmoor
- Manton Stone Quarry
- Kirmington Pit
- Cliff Farm Pit
- Broughton Far Wood
- Crowle Borrow Pits

Local Nature Reserves

Declared

- Brumby Wood, Scunthorpe
- Atkinson's Warren/Skippingdale Plantation, Scunthorpe
- Waters Edge, Barton upon Humber)
- Frodingham

Proposed

- Sawcliffe, Scunthorpe
- Dragonby Ponds, Scunthorpe
- Silkstone Pond, Scunthorpe
- Ashby Ville Ballast Pits, Scunthorpe
- Axholme Lane, Scunthorpe
- Butterwick Hale and Common, East Butterwick
- River Eau and Messingham Ings

- Elsham Marsh
- Chasehill Wood, North Killingholme
- Burton Woodland, Burton upon Stather
- Sheffields Hill, near Bagmoor Gullet
- Thealby Gullet
- Yorkshire East Gullet (north)
- Brumby Common, Scunthorpe
- Owston Ferry Castle

Sites of Local Nature Conservation Importance are not included in this list and are therefore not shown on the map as they are currently under review.

Appendix 2: Contact Addresses

Directorate of Airspace Policy
Civil Aviation Authority
CAA House
45-49 Kingsway
London
WC2B 6TE

MoD Lands Branch
Ministry of Defence
Leatherhead Road
Chessington
Surrey
KT9 2LT

Safeguarding
Defence Estates
Blakemore Drive
Sutton Coldfield
West Midlands
B75 7RL

Humberside International Airport
Kirmington
North Lincolnshire
DN39 6YH

Peel Airports (Finningley)
Doncaster Finningley International Airport
Hayfield Lane
Doncaster
DN9 3XA

Department of Trade and Industry
1 Victoria Street
London
SW1H 0ET

OFCOM
Riverside House
2a Southwark Bridge Road
London
SE1 9HA

BBC Research Department
Kingwood Warren
Tadworth
Surrey
KT20 6NP

Independent Television Commission
Kings Worthy Court
Kings Worthy
Winchester
Hampshire
SO23 7QA

Radiocommunications Agency
South Quay Three
189 Marsh Wall
London
E14 9SX

Home Office
Police Department
F7/11 Division
Horseferry House
Dean Ryle Street
London
SW1P 2AE

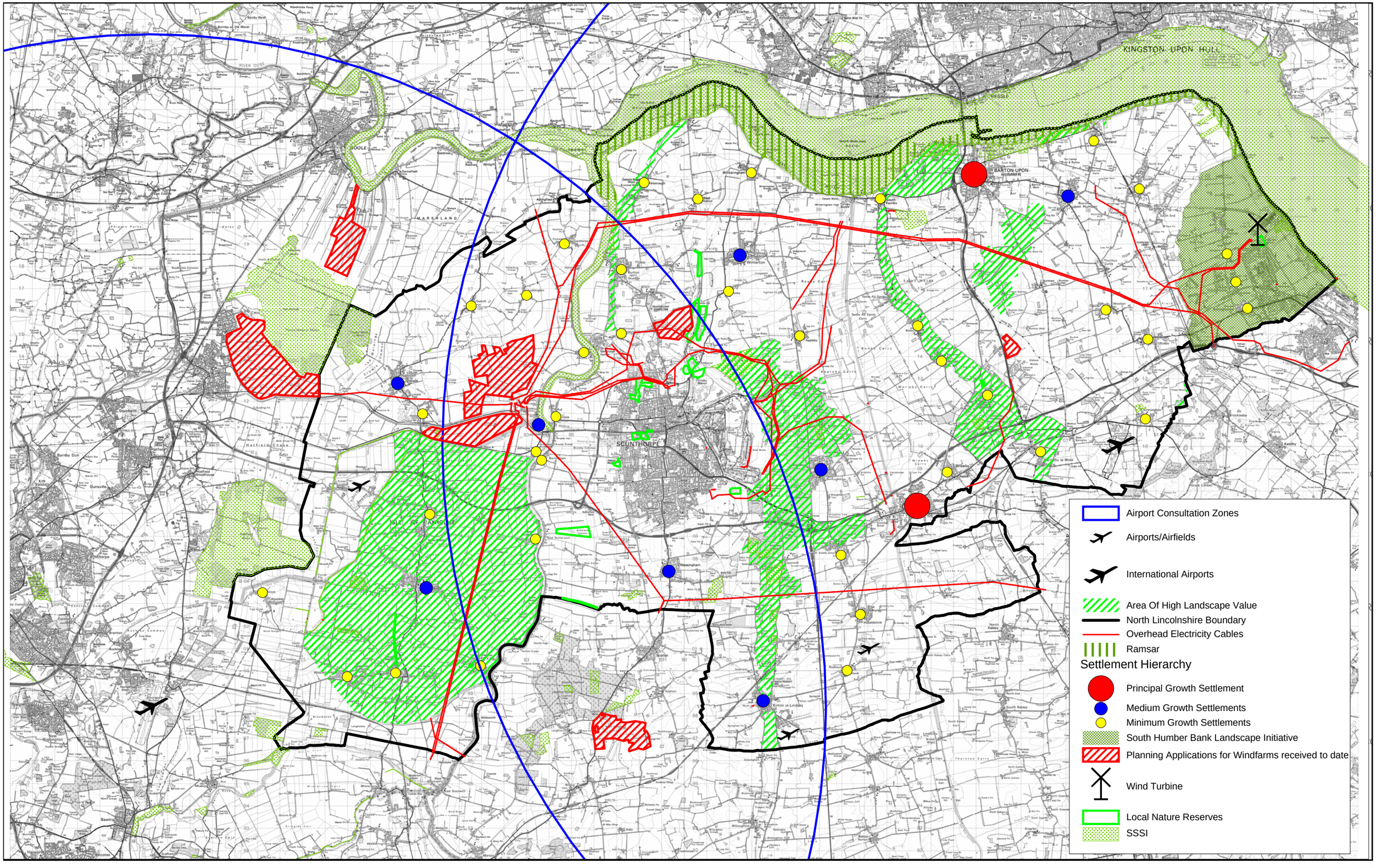
O2
1 Brunel Way
Slough
Berkshire
SL1 1XL

Orange
St. James Court
Great Park Street
Almondsbury
Bristol
BS12 4QJ

One 2 One
Imperial Place
Borehamwood
Hertfordshire
WD6 1EA

NTL
Crawley Court
Winchester
Hampshire
SO21 2QA

Vodaphone
The Courtyard
2-4 London Road
Newbury
Berkshire
RG13 1JL



Drawing Title: Wind Energy Development Map

Drawn by: IG

Scale: 1:150,000

Date: 27/10/2004

Planning and Regeneration Service
Head of Service,
T Lyman BSc(Hons), DipTP, MRTPI