

Report to:

Rutland County Council

for

**Rutland Landscape Sensitivity and Capacity Study - Wind
Turbines**

by

The Landscape Partnership

date

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1 Executive Summary

- 1.1 This report was commissioned by Rutland County Council in December 2011. It assesses the landscape and visual sensitivity and capacity across Rutland County to accommodate wind turbine development. Landscape and visual sensitivity and capacity form some of the many considerations that should be taken into account in relation to wind turbine developments. Related factors e.g. nature conservation, heritage designations and noise did not form part of the brief or the study and guidance on these subjects will be provided separately by Rutland County Council (see section 2 for more detail). This report will be used by Planning Officers at the authority to inform planning policy development and enable them to make informed judgements on the suitability of wind turbine developments. It will also be available to landowners, developers, applicants and local interest groups to provide guidance on what is expected from planning applications and to identify areas and circumstances where turbine development is unlikely to be acceptable due to potential landscape and visual impacts.
- 1.2 The report has been produced in the light of the policy and guidance provided by The Climate Change Act 2008, The UK Renewable Energy Strategy 2009, National Policy Statements on Energy (EN-1) and Renewable Energy Infrastructure (EN-3) and the National Planning Policy Framework. It also considers best practice guidance on wind farm development, the East Midlands Regional Plan and other regional studies, and any approaches to wind energy being applied by local authorities adjacent to Rutland. The report provides detailed criteria to assess proposed wind farm development in the authority in support of the emerging policies in the LDF.
- 1.3 The report considers a number of impacts that turbine developments of both different scales and numbers. The scales of turbine considered are small (<50m height to blade tip - turbines often proposed in association with farms or industrial units), medium (50-99m to blade tip) and large (turbines at 100m and above to blade tip - the height of most modern commercial turbines). The typology of turbine development considered is (developed through knowledge and experience of wind turbine developments across the country):
- **Single Turbine**
 - **Small Scale Group** – a linear or clustered arrangement of 2-5 turbines
 - **Small to Medium Scale Group**– a linear or clustered arrangement of 6-11 turbines
 - **Medium Scale Group** – a linear or clustered arrangement of 12-16 turbines
 - **Large Scale Group** – a large development of 17 or more turbines
- 1.4 The capacity study uses the established Landscapes Character Areas within Rutland as a spatial framework to assess suitability of the landscape to accommodate wind turbine development. Some of the Sub Areas identified in the Rutland Landscape Character Assessment have been further divided based on the findings of the fieldwork and the characteristic nature of wind turbine development. The capacity is assessed based on a combination of the sensitivity of each Sub Area and a measure of the relative landscape value.
- 1.5 The sensitivity of each of the Landscape Character Sub Areas to a range of wind turbine sizes and typologies was assessed by completing a detailed matrix considering the following factors: Landform scale and sense of enclosure, Landcover pattern, scale and sense of enclosure, Landcover change, Settlement pattern and density, Views and Skyline, Landmarks and impact of built development, Remoteness and Tranquillity, and Visibility from outside and connections with adjacent landscapes. The relative landscape value was based on the presence of landscape designations. The combination of sensitivity and value determined the relative capacity of each of the Landscape Character Areas to accommodate wind turbines.

The results are as summarised below, with further detail provided in sections 3 and 4 and in Appendix 6.

Landscape Capacity for Small turbines (up to 50m)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Moderate	Moderate	Low	Low	Low
B: Vale of Catmose	Moderate	Moderate	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	High	High	Moderate	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	Moderate	Low	Low	Low
Dii: Clay Woodlands	High	High	Moderate	Low	Low
Diii: Gwash Valley	Moderate	Moderate	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

Landscape Capacity for Medium turbines (50-99m)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Low	Low	Low	Low	Low
B: Vale of Catmose	Moderate	Moderate	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	High	Moderate	Low	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	Low	Low	Low	Low
Dii: Clay Woodlands	High	Moderate	Moderate	Low	Low
Diii: Gwash Valley	Low	Low	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

Landscape Capacity for Large turbines (100m +)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Low	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Low	Low	Low	Low	Low
B: Vale of Catmose	Moderate	Low	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	Moderate	Moderate	Low	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Low	Low	Low	Low	Low
Dii: Clay Woodlands	Moderate	Moderate	Moderate	Low	Low
Diii: Gwash Valley	Low	Low	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

- 1.6 The visual impact of turbine development can be categorized into levels of likely magnitude which would occur at different distances. It should be noted that these definitions apply where there are open or partial views of a wind turbine development. Within Rutland County topography can provide significant screening of turbines, with buildings or planting also able to provide localised screening and reduce visual impacts within the ranges set out below.

**Categories of Magnitude for Visual Impact of Turbines
(for turbines between 100-130m high)**

Distance from turbines	Magnitude of impact	Description
Within 800m	Dominant	Turbines form the principle element of the view and may overpower the viewer
800m-2km	Prominent	Turbines form a very large element of the view, commanding and controlling the view
2-5km	Conspicuous	Turbines form a large element of the view, standing out from the surroundings and forming an unmistakable feature within the panorama.
5-15km	Apparent	Turbines form a medium element of the view, noticeable in panoramas, clearly visible and catching the eye.
15-30km	Inconspicuous	Turbines form a small element of the view, that is visible but not distinct or obvious on first glance or in overcast conditions
Over 30km	Negligible	Turbines form a very small element of the view, barely visible in clear conditions

- 1.7 In order to allow for a range of turbine heights, proportional increases/decreases have been applied pro rata to the distances and magnitudes for the 100-130m range as above to indicate relative distances and level of magnitude of visual impact that would apply to different sizes of turbine. The results of this are shown below.

Visual Impacts of Turbines Extrapolated for Different Turbine Heights

Magnitude of impact	Distance from turbines						
	Height of turbine	Up to 50m	50-70m	71-85m	86-99m	100-130m	131-c.150m
Dominant		Within 320m	Within 480m	Within 575m	Within 680m	Within 800m	Within 920m
Prominent		320-800m	480m-1.2km	575m-1.4km	680m-1.7km	800m-2km	920m-2.3km
Conspicuous		800m-2km	1.2-2.8km	1.4-3.6km	1.7-4.3km	2-5km	2.3-5.7km
Apparent		2-6.5km	2.8-8.6km	3.6-10.7km	4.3-12.9km	5-15km	5.7-17.1km
Inconspicuous		6.5-12.8km	8.6-17.1km	10.7-21.4km	12.9-25.7km	15-30km	17.1-34.3km
Negligible		Over 12.8km	Over 17.1km	Over 21.4km	Over 25.7km	Over 30km	Over 34.3km

- 1.8 The cumulative impact of existing wind turbines on the landscape, i.e. the combined impact of separate wind turbine developments is considered. Cumulative visual impact is assessed in three categories: combined/simultaneous, successive/repetitive

and sequential. The first two types of impact are considered within a 10km range between existing, consented or proposed turbines. The sequential impact would apply in relation to users of roads, rail and rights of way through Rutland.

1.9 The report concludes by setting out detailed landscape and visual guidelines to assist with the future assessment of wind turbine applications. These criteria should initially be applied at the Scoping Opinion stage and then if a scheme progresses further more fully through a Planning Application and supporting Environmental Statement. Non-compliance with an individual criterion should not necessarily preclude turbine development. However, all the environmental factors should be carefully evaluated and then balanced by the planning authority against the benefits of contributing to regional and national targets for renewable energy generation. The guidelines should also always be considered in conjunction with a detailed study of the site and its surroundings, particularly in terms of the pattern of landform, existing vegetation, buildings and structures that may provide visual mitigation of a proposed wind turbine development.

1.10 Guidelines are provided under the following headings:

- Landscape Character
- Landscape Capacity
- Visual Impacts
- Cumulative Landscape Impacts
- Cumulative Visual Impacts
- Recreation and Transport Routes
- Mitigation
- Guidance on form and siting

2 Introduction

Purpose of the report

- 2.1 The Landscape Partnership was commissioned by Rutland County Council in December 2011 to undertake a study that would assess the landscape and visual sensitivity and capacity across Rutland County to accommodate wind turbine development. The assessment was to relate to a range of turbine sizes from small (excluding domestic micro-generation) to very large turbines with blade-tip heights in the order of 130m or more.
- 2.2 Landscape and visual sensitivity and capacity form some of the various considerations that should be taken into account in relation to wind turbine developments. Other related factors e.g. nature conservation, heritage designations and noise, did not form part of the brief for this report but will be considered by Rutland County Council in a separate Supplementary Planning Document (SPD). The SPD will address the full range of considerations, as follows:
- Landscape Impact
 - Visual Impact
 - Cumulative Impact
 - Shadow Flicker and reflected light
 - Noise
 - Amplitude Modulation
 - Separation distances from residential dwellings
 - Footpaths
 - Bridleways
 - Power lines, Roads and Railways
 - Nature Conservation
 - The Historic and Cultural environment
 - Grid Connection
 - Air Traffic and radar
 - Form and siting
 - Mitigation
 - Decommissioning and reinstating land
- 2.3 There is likely to be an inter-relationship between some of these other related factors and the contents of this study. In particular the detailed application of Historic Landscape Characterisation is not included in the study, but this should be fully addressed in the consideration of cultural heritage issues.
- 2.4 The study is intended to assist Rutland County Council in developing the landscape and visual impact elements of its policy approach towards wind turbines and in considering the landscape and visual impacts of any future planning applications that may be submitted.
- 2.5 The findings of this study have been used to produce a set of guidelines to inform potential applicants and the planning authority. These reflect both the suitability of a range of wind turbine sizes (of different heights) and typologies (or numbers of turbines in a group). The relative suitability of the differing sizes and typologies has been assessed across range of landscapes within Rutland. The guidelines are intended to allow a consistent and considered judgement to be made of proposed developments. In addition the study is intended provide developers with range of topics to consider and the level of information required to accompany a planning application. However it should be noted that the planning authority may identify other considerations that are relevant for individual applications in addition to the topics covered in this report.

- 2.6 The report was subject to consultation with a number of environmental consultees during March and April 2012. Comments were received from English Heritage, Natural England, RCC Planning and Climate Change Officers and the Local Strategic Partnership's Environmental Theme Group: Task and Finish Team. All the comments received were evaluated and a number of changes were made to the report in order to reflect these comments. Further detail can be found in the separate Consultation Statement accompanying this study.

Use of the Report

- 2.7 This document is intended to be used by Planning Officers at Rutland County Council, to enable them to make an informed judgement on the suitability of wind turbine development proposals within the Authority and when responding to applications within adjacent Authorities. Key elements of the report should also be made available to landowners, developers, applicants and local interest groups to provide guidance on what is expected from planning applications and identify areas and circumstances where turbine development is unlikely to be acceptable due to potential landscape and visual impacts.
- 2.8 The document is not intended to replace the requirements of an Environmental Impact Assessment (EIA) under The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended). Rutland County Council is likely to require a full EIA for all wind turbine developments, which fall under Schedule 2 of the Regulations. Detailed consideration of a site may identify factors specific to a site that counteract issues identified in this document.

Existing Situation in Rutland

- 2.9 To date Rutland County Council (see Figure 1 for location plan) have only received one planning application for large-scale wind turbines. There was an Application in 2003 for two wind turbines up to a tip height of 100m on Steadfold Lane, Ketton (application number FUL/2003/0357). This application was withdrawn over concerns relating to low flying aircraft at RAF Cottesmore. Following the announcement of a change of military use of the RAF Cottesmore site a new application for two turbines at the same location was submitted in February 2012 (application number APP/2012/0124). A scoping request was also made for a potential scheme of 22 turbines at the former Woolfox Airfield (application number PRE/2011/0015). An application has not been received for this site to date.
- 2.10 A number of smaller turbines have been approved throughout the County. It would appear that these are generally less than 50m in height to blade tip, although full details of the height of the turbines is not provided for all of the applications. These are listed in Appendix 1 and shown on Figure 1.

Existing Rutland County Council Policy and Guidance

- 2.11 Rutland County Council's Core Strategy DPD contains **Policy CS20 – Energy Efficiency and Low Carbon Energy Generation**. The policy covers a range of approaches to reducing CO2 emissions and generating energy from renewable sources. The preamble to the policy indicates:

Some potential for low carbon energy generation from wind turbines, biomass and straw and energy crops in Rutland was identified in the "Planning for Climate Change" study and such uses will be supported where they help meet national targets for low carbon energy generation and are acceptable in terms of the local impact.

- 2.12 The preamble also identifies that more detailed criteria relating to wind turbines and other low carbon energy generating developments will be set out in the Site Allocations and Policies DPD. At present Rutland County Council is consulting on the Issues and Options stage of its Site Allocations and Policies DPD, which is not only seeking to identify suitable sites for new housing but also whether any more detailed guidance on wind turbines and other low carbon energy developments is needed. The wording of policy CS20 in the adopted Core Strategy is as follows:

Renewable, low carbon and de-centralised energy will be encouraged in all development. The design, layout, and orientation of buildings should aim to minimise energy consumption and promote energy efficiency and use of alternative energy sources.

All new housing developments will be encouraged to meet the minimum energy efficiency standards of the Code for Sustainable Homes in accordance with the government's proposed timetable for improving energy efficiency standards beyond the requirements of the Building Regulations. All new non-domestic buildings will be encouraged to meet BREEAM design standards for energy efficiency.

Wind turbines and other low carbon energy generating developments will be supported where environmental, economic and social impacts can be addressed satisfactorily and where they address the following issues:

- a) landscape and visual impact, informed by the Rutland Landscape Character Assessment and the Rutland Historic Landscape Character assessment;*
- b) effects on the natural and cultural environment including any potential impacts on the internationally designated nature conservation area of Rutland Water;*
- c) effects on the built environment, public and residential amenity, including noise intrusion;*
- d) the number and size of wind turbines and their cumulative impact;*
- e) the contribution to national and international environmental objectives on climate change and national renewable energy targets.*

- 2.13 **The Countryside Design Guidance for Rutland** has been adopted as Supplementary Planning Guidance (SPG) by Rutland County Council, in support of the Rutland Landscape Character Assessment (see section 4 for further details of the Rutland Landscape Character Assessment). The Countryside Design Guidance for Rutland SPG aims to:

help ensure that new buildings and uses in the countryside fit in with their surroundings and help to safeguard and enhance the distinctive landscape character of the different parts of Rutland

- 2.14 Within the SPG, a summary of the landscape and settlement character of each Landscape Character Sub Area is provided, along with an overall aim and a number of objectives. The overarching aim of the SPG relates to safeguarding and enhancing the landscape.

- 2.15 The SPG also contains guidance for development in the countryside. This includes specific guidance in relation to energy production, as follows:

Development Essential for Utility Services and Energy Generation

Local Plan Policies UT2 and UT9 provide guidance on telecommunication structures and structures necessary for energy production. Radio telecommunication masts and other utility and energy generating structures can be obtrusive in the landscape and visible in long distance views, particularly in prominent locations such as on sky lines around the valleys and basins, on ridges and in areas with few buildings.

In order to mitigate against this and minimise their effect on the landscape, telecommunication masts and other utility and energy generating structures should where possible:

- 1. Be sited away from prominent locations so as not to feature conspicuously in and detract from long distance views or the setting of settlements.*

2. *Be sited where they are seen in relation to existing built or natural features, which would provide a mitigating visual effect on the scale of the structure, concerned.*
 3. *Be of a low-reflective finish and of a colour appropriate to their setting in the landscape.*
 4. *Meet with other guidance in the Countryside Design Guide*
- 2.16 It is acknowledged that there may be situations where it is difficult to fully meet all the aims and objectives of the Countryside Design Guidance SPG while also complying with Policy CS20. The assessment of each proposal will need to be made on its own merits balancing the requirements of Policy CS20 and the aims and objectives of the SPG.

Other Existing Guidance on Renewable Energy

- 2.17 The 1997 Kyoto Protocol set internationally agreed and binding targets for reducing emissions of greenhouse gases up to 2012. Through the Kyoto Protocol, the UK has a legally binding target to reduce emissions of greenhouse gases by 12.5% below 1990 levels in the period 2008-2012. Further to this, the UK government committed to a 30% reduction in emissions below 1990 levels as part of the European Council meeting of Heads of Government in Spring 2007.
- 2.18 The Climate Change Act 2008 introduced a new legal framework for the UK, which sets a legally binding target to reduce greenhouse gas emissions to at least 80% below 1990 levels by 2050 and to at least 26% below 1990 levels by 2020 (subsequently increased to 34% by 2020 by DECC).
- 2.19 The UK Renewable Energy Strategy (UKRES) 2009 states that the UK needs to increase the use of renewable electricity substantially. The document sets out the means by which the UK can meet the legally binding target of 15% of energy consumption from renewable sources by 2020 (as required by EU Directive 2009/28/EC). The UKRES contains a 'lead scenario', which suggests that more than 30% of electricity should be generated from renewables in the UK by 2020. The majority of this is expected to come from wind power, on and offshore. This is further supported by the Coalition Government's 'Our Programme for Government' (May 2010).
- 2.20 The UK Renewable Energy Roadmap identifies the current situation and recent trends in renewables deployment in the UK, as well as the pipeline of projects that could come forward before 2020 and the barriers that need to be overcome to enable these projects to be delivered. The Roadmap concludes that the 15% target should be met by 2020, it highlights that significant uncertainties remain about the delivery of additional renewable energy generation capacity, and that new renewable energy projects need to come forward if the 2020 targets are to be met.

National Policy Statements

- 2.21 National Policy Statements (NPSs) on Energy (EN-1) and Renewable Energy Infrastructure (EN-3) were approved by Parliament in July 2011, both of which are *'likely to be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended)'*. Therefore they do not apply just to developments that would be considered by the Infrastructure Planning Commission (IPC). EN-1 highlights that to meet emissions targets, the consumption of electricity will need to be almost exclusively from low carbon sources. Thus, in the short-term, much of the new capacity would need to come from on and off-shore wind generated electricity. To meet the 2020 target for energy from renewable sources, EN-1 identifies that there is an urgent need to bring forward new renewable

electricity generating projects as soon as possible. Whilst off-shore wind is expected to provide the largest single contribution to the 2020 target, on-shore wind is highlighted as the best established and currently the most economically viable source of renewable energy available for future large-scale deployment.

- 2.22 EN-3 reiterates the important role of on-shore wind, indicating that *'onshore wind farms are the most established large scale source of renewable energy in the UK. Onshore wind farms will continue to play an important role in meeting renewable energy targets'*. It deals with issues including landscape and visual impact, noise, biodiversity, the historic environment recognising that there will always be significant landscape and visual impacts.
- 2.23 EN-1 sets out generic assessment principles for all types of energy project. At paragraph 4.1.2 it identifies that there should be a presumption in favour of granting consent to applications for energy, unless any more specific and relevant policies set out in the NPSs indicate that consent should be refused. In section 4.2 the role of Environmental Statements (or statements covering similar information where an ES is not required) is considered, with paragraph 4.2.2 stating that it would be: *helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated*
- 2.24 Paragraphs 4.2.5 and 4.2.6 relate to the cumulative effects of proposals. 4.2.5 indicates: *the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)*
- 2.25 Paragraph 4.2.6 adds that decision makers: *should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place*
- 2.26 Section 4.5 of EN-1 relates to the criteria for 'good design' of energy infrastructure. This section indicates that *'good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts'*. It also indicates that energy infrastructure developments should ensure they *'are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be'* with *'opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation'*.
- 2.27 Section 5 of EN-1 considers the generic impacts of energy projects, addressing those impacts and means of mitigation that are likely to occur most frequently. These include:
- Air quality and emissions
 - Biodiversity and geological conservation
 - Civil and military aviation and defence interests
 - Coastal change
 - Dust, odour, artificial light, smoke, steam and insect infestation
 - Flood risk
 - Historic environment
 - Landscape and visual
 - Land use including open space, green infrastructure & Green Belt
 - Noise and vibration
 - Socio-economic
 - Traffic and transport

- Waste management
 - Water quality and resources
- 2.28 The majority of these generic impacts are either beyond the scope of this study or not relevant to wind turbines and/or Rutland County. The main consideration for this study is the landscape and visual impacts, covered in section 5.9. This section identifies that landscape and visual impacts will vary on a case by case basis, depending on *'the type of development, its location and the landscape setting of the proposed development'*.
- 2.29 Section 5.9 includes reference to landscape and visual assessments being prepared for energy projects, in line with guidance such as Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition): Guidelines for Landscape and Visual Impact Assessment; and Land Use Consultants (2002): Landscape Character Assessment – Guidance for England and Scotland. Assessments should also reference and *'landscape character assessment and associated studies'*, as well as taking account of *'any relevant policies based on these assessments in local development documents'*.
- 2.30 The following points are also made in section 5.9, in relation to the decision making process:
- Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change
 - Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate
 - Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation
 - Local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development
 - It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors
 - Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista
- 2.31 EN-3 sets out more specific information in relation to renewable energy, including wind turbine developments. Section 2.7 identified specific considerations in relation to Onshore Wind. Section 2.7 identifies the following factors influencing site selection by the applicant:
- Predicted wind speed - applicants will often install a temporary anemometry mast on site to ascertain precise onsite wind speeds
 - Proximity of site to dwellings – the two main impact issues are visual amenity and noise
 - Capacity of a site – relating to the spacing of turbines
 - Electricity grid connection – the capacity of the local grid and the distance from the existing network
 - Access – applicants will need to consider the suitability of access routes, particularly during construction
- 2.32 The following technical considerations in relation to determining applications for onshore wind farms are also provided:
- Access tracks – the full extent of access tracks necessary should be included and assessed

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- Project lifetimes – applicants should set out details of what will be decommissioned and removed from site at the end of the operational life. Conditions can be imposed to set a time-limit from the date a wind farm starts to generate electricity
 - Flexibility in the project details – if turbine details or other relevant information is not available at the time of application, the impact the project could have should be assessed using the worst case scenario and outlining where there is any uncertainty
 - Micrositing – a tolerance of between 30m and 50m is typical, but there may be circumstances where the decision maker feels it is necessary to restrict this tolerance
 - Repowering – applications to repower an existing site with new turbines should be considered on their own merit
- 2.33 EN-3 provides further detail on impact assessment principles. Of the list provided in EN-1, with some additions, the following are considered in EN-3:
- Biodiversity and geological conservation
 - Historic environment
 - Landscape and visual
 - Noise and vibration
 - Shadow flicker
 - Traffic and transport
- 2.34 The following principles are identified within EN-3:
- In sites with nationally recognised designations (Sites of Special Scientific Interest, National Nature Reserves, National Parks, the Broads, Areas of Outstanding Natural Beauty and Registered Parks and Gardens), consent for renewable energy projects should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development, and any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits
 - When located in the Green Belt, projects will constitute inappropriate development, which may impact on the openness of the Green Belt.
 - Decision makers should not use a sequential approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land for renewable technology developments)
- 2.35 Specific landscape and visual considerations in relation to onshore wind turbines are also set out in EN-3. These include:
- Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometers around a site.
 - The arrangement of wind turbines should be carefully designed within a site to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints.
 - There are existing operating wind farms where commercial scale wind turbines are sited close to residential dwellings. The (decision maker) should consider any evidence put before it on the experience of similar-scale turbines at similar distances to residential properties.
 - In terms of mitigation, it is unlikely that either the number or scale of wind turbines can be changed without significantly affecting the electricity generating output of the wind farm. Therefore, mitigation in the form of reduction in scale may not be feasible.

National Planning Policy Framework

- 2.36 In March 2012 the government published the National Planning Policy Framework, with the intention of consolidating and streamline the guidance provided in Planning Policy Statements and Planning Policy Guidance. This final published version of the NPPF replaces the majority of PPSs and PPGs, as set out in Annex 3 of the Framework. It does not, however, replace the Companion Guide to PPS22 'Planning for Renewable Energy', which provides technical guidance on renewable energies from energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also biomass. The Companion Guide addresses considerations for preparing and reviewing planning applications for different types of renewable energy production. This includes onshore wind turbine development and provides detail as to the factors that should be considered in relation to wind turbine development, including noise, low frequency noise (infrasound), landscape and visual impact, listed buildings and conservation areas, safety, proximity to roads and infrastructure, ecology and ornithology, electromagnetic production and interference, interference with electromagnetic transmissions, shadow flicker and reflected light, icing and archaeology. It does not, however, provide detailed guidance on assessing the impacts of a wind turbine development. This report provides the detailed guidance for Rutland County Council on Landscape and Visual matters which includes reference to guidance documents produced by other organisations as necessary.
- 2.37 Central to the NPPF is a presumption in favour of sustainable development. Planning policies and decisions should reflect and where appropriate promote the achievement of relevant EU obligations and the statutory requirements set out in UK legislation. The NPPF defines sustainable development as follows:
meeting the needs of the present without compromising the ability of future generations to meet their own needs. The UK Sustainable Development Strategy Securing the Future set out five 'guiding principles' of sustainable development: living within the planet's environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly.
- 2.38 Twelve core principles are identified in the NPPF, which should underpin both plan-making and decision-taking. Of these twelve core principles, the following are most relevant to wind turbine development:
- *always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings*
 - *take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it*
 - *support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy)*
 - *contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework*
- 2.39 The NPPF contains a section on 'Meeting the challenge of climate change, flooding and coastal change'. This section identifies the role that planning plays in supporting the delivery of renewable and low carbon energy and associated infrastructure. Paragraph 97 of the NPPF identifies:

To help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. They should:

- *have a positive strategy to promote energy from renewable and low carbon sources;*
- *design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;*
- *consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources;*
- *support community-led initiatives for renewable and low carbon energy, including developments outside such areas being taken forward through neighbourhood planning; and*
- *identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers*

2.40 In addition, a footnote to the third of these bullet points reads:

In assessing the likely impacts of potential wind energy development when identifying suitable areas, and in determining planning applications for such development, planning authorities should follow the approach set out in the National Policy Statement for Renewable Energy Infrastructure (read with the relevant sections of the Overarching National Policy Statement for Energy Infrastructure, including that on aviation impacts). Where plans identify areas as suitable for renewable and low-carbon energy development, they should make clear what criteria have determined their selection, including for what size of development the areas are considered suitable.

2.41 Finally, in relation to determining applications for renewable or low carbon energy projects, the NPPF states:

local planning authorities should:

approve the application¹⁸ if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should also expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

¹⁸ *Unless material considerations indicate otherwise.*

2.42 Section 11 of the NPPF relates to 'Conserving and enhancing the natural environment'. It states:

The planning system should contribute to and enhance the natural and local environment by:

- *protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *recognising the wider benefits of ecosystem services;*
- *minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*

2.43 Paragraph 113 within Section 11 states:

Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is

commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks

- 2.44 The NPPF also indicates that Local Planning Authorities should ensure that they have in place a Local Plan covering their area that *'is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area'*. The evidence base should be proportionate. The NPPF contains a list of the types of documents that may be appropriate as an evidence base, which includes:

Where appropriate, landscape character assessments should also be prepared, integrated with assessment of historic landscape character, and for areas where there are major expansion options assessments of landscape sensitivity

Regional Spatial Strategy

- 2.45 The East Midlands Regional Plan is the Regional Spatial Strategy for the East Midlands and was adopted in March 2009. It still forms part of the Development Plan until revocation of RSSs under the Localism Act 2011. Policies contained within the RSS include Policy 1 – Regional Core Objectives, which includes the following core objectives relevant to wind turbine development:

- g) To protect and enhance the environment*
- i) To reduce the cause of climate change by minimising emissions of CO2 in order to meet the national target*
- k) To minimise adverse environmental impacts of new development and promote maximum social and economic benefits*

- 2.46 Policy 26 – 'Protecting and enhancing the region's natural and cultural heritage' seeks to ensure the protection, appropriate management and enhancement of the Region's natural and cultural heritage. Policy 28 – 'Regional priorities for environmental and green infrastructure' promotes an integrated approach to the delivery, protection and enhancement of environmental and green infrastructure, whereas Policy 31 – 'Priorities for the management and enhancement of the region's landscape' relates to the protection and enhancement of natural and heritage landscapes, including *"the establishment of criteria-based policies in Local Development Frameworks to ensure that development proposals respect intrinsic landscape character in rural and urban fringe areas, including, where appropriate, recognition of the value of tranquillity and dark skies"*. The most specific policy in terms of wind turbine development, however, is Policy 40 – 'Regional priorities for low carbon energy generation', which includes the following:

In establishing criteria for onshore wind energy, Local Planning Authorities should give particular consideration to:

- landscape and visual impact, informed by local Landscape Character Assessments;*
- the effect on the natural and cultural environment (including biodiversity, the integrity of designated nature conservation sites of international importance, and historic assets and their settings);*
- the effect on the built environment (including noise intrusion);*
- the number and size of turbines proposed;*
- the cumulative impact of wind generation projects, including 'intervisibility';*
- the contribution of wind energy projects to the regional renewables target; and*
- the contribution of wind generation projects to national and international objectives on climate change*

Regional Studies

- 2.47 In addition to the Regional Spatial Strategy, there have been two studies undertaken that cover Rutland County and relate to wind turbine developments. The first of

these is a regional study entitled 'Low Carbon Energy Opportunities and Heat Mapping for Local Planning Areas Across the East Midlands', which was prepared for the East Midlands Councils and published in March 2011. The second is a study covering Rutland and parts of Leicestershire entitled 'Planning for Climate Change: Renewable Energy Opportunities for Blaby, Harborough, Hinkley and Bosworth, Melton, North West Leicestershire, Oadby and Wigston and Rutland (July 2008).

- 2.48 The Low Carbon Energy Opportunities study *"sets out an evidence base of the technical potential for renewable and low carbon energy technologies within the East Midlands. It aims to assist local planning authorities across the East Midlands in developing well-founded policies and strategies that support low carbon energy deployment up to 2030"*. The study covers a range of renewable and low carbon energy technologies, and in relation to onshore wind considers both commercial scale and small scale (<6kW) developments. In relation to commercial onshore wind, the study *"takes into account the available wind speeds and the size and density of turbines that could theoretically be deployed. This is followed by the removal of a series of constraints relating to physical features e.g. roads, railways, rivers, environmental protection (e.g. nature conservation designations) and aviation constraints"*. The study considered three commercial turbine sizes:
- large-scale turbines (dimensions: tip height 135m, rotor diameter 100m, hub height 85m, 2.5MW)
 - medium-scale turbines (dimensions: tip height 90m, rotor diameter 60m, 1MW)
 - small-scale turbines (dimensions: tip height 65m, rotor diameter 43m, 0.5MW)
- 2.49 In relation to small scale (<6kW) wind, the study involved *"identifying the number of residential and non residential properties within an area and assuming that a 6kW machine would be installed on all sites which have a wind speed above 4.5m/s. A wind speed scaling factor was applied to take account of the potential for obstructions in built up areas to reduce the average wind speeds and therefore the number of suitable properties"*.
- 2.50 The results of the study are presented by County and subdivided by Local Authority. They identify the Renewable Energy Resource Potential, with wind energy potential identified as by far the greatest renewable energy potential in Rutland County, although it is noted that Rutland does have "significant constraints in relation to bird sensitivity issues". Map 4.16 of the study is the onshore wind energy opportunity plan that covers Rutland County, identifying large areas of potential constraint. However, the study did not take into account the sensitivity and capacity of the Rutland landscape, nor the visual impacts of turbines, as part of its methodology.
- 2.51 The Planning for Climate Change study was *"initiated to provide evidence to underpin the preparation of future planning policy relating to climate change"*. In relation to wind energy, the study considers a range of constraints to wind turbine developments, including wind speed, a 400m buffer from residential properties, local topography, Sites of Special Scientific Interest, Common Land, World Heritage Sites, topple distance to major arteries, air traffic and electromagnetic interference considerations, and a 50m buffer zone to footpaths. However, again the study did not take into account the sensitivity and capacity of the Rutland landscape, nor the visual impacts of turbines, as part of its methodology.
- 2.52 The study identified four specific sites in Rutland with potential to accommodate small groups of wind turbines, based on the factors set out above (and excluding landscape and visual matters), as follows:
- Belton-in-Rutland - Near the western boundary of Rutland council, this site would be suitable for 2-3 wind turbines.

- Wardley - Site located between Belton-in-Rutland and Wardley and suitable for 2-4 wind turbines. Footpaths could be an issue for planning and reduce the available area for wind turbines.
- Prestley Hill - Site located between Lyddington and Seaton. Fairly large site for wind turbines, suitable for 4-5 wind turbines.
- Ashwell - Site near Langham, suitable for up to 3 wind turbines. Proximity to the RAF Cottesmore Airfield (around 6km) means would have to be subjected to technical analysis to assess possible interference with airfield operation.

2.53 It should be noted that because the Planning for Climate Change study did not take into account landscape and visual matters its findings are likely to vary from the outcomes of this Rutland Landscape Sensitivity and Capacity Study in relation to Wind Turbines. Landscape and visual matters are an important consideration in relation to considering the suitability of locations for wind turbine development, but other factors, such as those considered in the Planning for Climate Change study, also need to be considered in tandem.

2.54 It should also be noted that both the Low Carbon Energy Opportunities and Planning for Climate Change studies considered RAF Cottesmore as a restricting factor to wind turbine development due to potential air traffic issues. Since the studies were undertaken the MoD use of RAF Cottesmore has altered and there are no current or future planned flying activities at the base. However, at present air traffic radars remain at the base and may remain a constraint to turbine development.

Historic Landscape Characterisation

2.55 Leicestershire County Council (LCC) has undertaken a Historic Landscape Characterisation Project covering Leicestershire, Leicester and Rutland. The project was published in 2010 and is seen as a:
“tool aiding heritage professionals to manage change within the historic environment and it is particularly relevant when working at a landscape scale”.

2.56 The study also:
“Provides much of the necessary information for developing an understanding of the historic dimension of the contemporary landscape which will inform appropriate and effective management strategies”.

2.57 The study uses a predominantly desk-based to analyse both the attributes of the current landscape and various resources such as historic mapping. From this analysis, twelve broad historic landscape character types were identified, as follows:

- Unenclosed Land
- Fields and Enclosed Land
- Orchards and Allotments
- Woodland
- Industrial
- Extractive
- Military
- Ornamental, Parkland and Recreational
- Settlement
- Civic and Commercial
- Transportation
- Water and Valley Floor

2.58 These twelve broad types were further divided into more detailed historic landscape character types. These historic landscape character types relate to the landuse and the length of time that the landuse has been in place, as well as the form of the landuse. This process has identified 78 different historic landscape character types

within Rutland, at a detailed field by field scale. In accordance with Core Strategy Policy CS20, Historic Landscape Characterisation should be considered in relation to assessing the landscape and visual impacts of wind turbine development. This LCC study has been referenced in the assessment of the sensitivity and capacity of Rutland's landscape to accommodate wind turbine development. However, given the fine grain nature of the study it is not practical to utilise the detailed historic landscape character types as a primary basis for the assessment. Within the analysis of landscape sensitivity later in this study, the factor of 'landcover change' provides an overview of the degree to which historic patterns in the landscape are still present and utilises information from the HLC.

Surrounding Authorities Approaches

- 2.59 The policy and guidance documents produced by the local authorities adjacent to Rutland County were reviewed in order to identify any (Supplementary Planning) Guidance or Documents in relation to wind turbine development produced to date. Review of this information can help to ensure consistency across local authority boundaries. Of the six local authorities adjacent to Rutland County, none have produced Supplementary Planning Guidance/Documents in relation to wind turbines to date.
- 2.60 Melton Borough Council, located to the north west of Rutland County, has policies in both its adopted Local Plan and the Publication (pre Examination) version of its Core Strategy that relate to renewable energy developments. The text of these policies can be found in Appendix 2.
- 2.61 Harborough District Council, located to the west of Rutland County, produced a Wind Turbines Developer Guidance Note in July 2009. The Guidance Note 'sets out advice for those preparing planning applications within Harborough District to ensure that all appropriate evidence and information is submitted in order to ensure that prompt decisions are made'. Section 5 of the Guidance Note sets out the topics to be covered in an Environmental Statement for a wind turbine development, as well as the circumstances when a full EIA might be required. The text of this section of the Guidance Note is provided in Appendix 2, along with the policy wording of Harborough District's 'Addressing Climate Change' policy from the adopted Core Strategy.
- 2.62 Corby District Council, located to the south of Rutland County, and East Northamptonshire District Council, located to the south east of Rutland County, form two of the LPAs that worked together to create the North Northamptonshire joint Core Spatial Strategy. The text of Policy 14: Energy Efficiency and Sustainable Construction can be found in Appendix 2.
- 2.63 The Core Strategy of South Kesteven District Council, located to the north east of Rutland County, contains Policy EN3: Renewable Energy Generation. The wording of this policy is provided in Appendix 2. The South Kesteven Landscape Character Assessment also considers the landscape sensitivity of landscape character areas within the District. The text for each character area that relates to landscape sensitivity can also be found in Appendix 2.
- 2.64 Peterborough City Council, located to the east of Rutland County, has Policy CS11 - Renewable Energy in its Core Strategy. The wording of this Policy is contained in Appendix 2.

3 Methodology

Wind Turbine Typologies

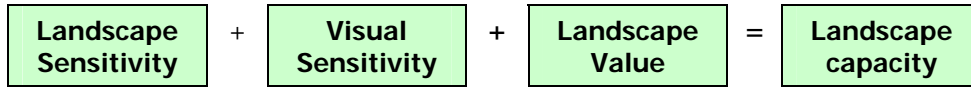
- 3.1 Wind turbines currently proposed across the country vary greatly from small turbines serving individual or small groups of properties to large scale turbines in commercial windfarms. It has therefore been assumed that future turbines could be proposed at a range of different sizes. These sizes, along with different scales of turbine development, have been identified in order to help identify what size of development may be considered suitable in an area in line with the 'Meeting the challenge of climate change, flooding and coastal change' section of the NPPF. The bandings chosen to represent these different scales of turbine are <50m height to blade tip (small scale turbines often proposed in association with farms or industrial units), 50-99m to blade tip and 100m+ to blade tip (the height of most modern commercial turbines). This varies slightly from the scale of turbines used in the regional Low Carbon Energy Opportunities and Heat Mapping study, where small-scale turbines were considered to have a tip height of 65m, medium-scale turbines a tip height of 90m and large-scale turbines a tip height of 135m.
- 3.2 Generic wind turbine typologies have also been developed for this study in order to help understand the effects of different scales of turbine development. These typologies have been developed through knowledge and experience of wind turbine developments across the country. Turbine developments have been grouped into five categories for the context of Rutland (although these do not include small domestic installations). The five categories of turbine development used for this study are:
- **Single Turbine** – a single turbine
 - **Small Scale Group** – a linear or clustered arrangement of 2-5 turbines
 - **Small to Medium Scale Group**– a linear or clustered arrangement of 6-11 turbines
 - **Medium Scale Group** – a linear or clustered arrangement of 12-16 turbines
 - **Large Scale Group** – a large development of 17+ turbines
- 3.3 Consequently, the combined effects of both the size of turbines and the scale of turbine development are assessed, with separate analysis tables completed for each size of turbine.

Assessing Landscape Capacity

Sensitivity

- 3.4 Baseline data was analysed to establish the sensitivity and capacity of Landscape Character Types and Sub-Areas within Rutland to wind energy developments. This was based on the Rutland Landscape Character Assessment produced in May 2003 by David Tyldesley and Associates and followed the established national guidance on Landscape Character Assessment found within the Countryside Agency and Scottish Natural Heritage document "Landscape Character Assessment: Guidance for England and Wales", 2002 and Topic Paper 6 – Techniques and criteria for judging capacity and sensitivity. During the field work stage some further sub divisions or groupings of existing Landscape Character Areas and Sub-Areas were identified due to the landscape characteristics and their relative suitability for wind turbines. The sensitivity and capacity of all these areas was established within the study.

- 3.5 Topic Paper 6 suggests approaches to evaluating landscape capacity and sensitivity in relation to different types of development. The three main aspects identified as determining Landscape Capacity are Landscape Sensitivity, Visual Sensitivity and Landscape Value. Based on this premise areas with lower capacity would therefore be relatively less likely to be to satisfactorily accommodate wind energy development:



- 3.6 For each landscape character type or sub-area identified in the Rutland Landscape Character Assessment a range of relevant factors to the sensitivity of the landscape to wind turbine development were evaluated in the field. These were considered for each character areas and sub area and for all the turbine typologies identified. The factors were based on the advice provided by Topic Paper 6 and previous studies, including neighbouring authorities. The factors considered were:

- Landform scale and sense of enclosure
- Landcover pattern, scale and sense of enclosure
- Landcover change
- Settlement pattern and density
- Views and Skyline
- Landmarks and impact of built development
- Remoteness and Tranquillity
- Visibility from outside and connections with adjacent landscapes

- 3.7 More detail on these factors and how they relate to sensitivity can be found in Appendix 3. These factors are identified in order to meet the requirements of the 'Meeting the challenge of climate change, flooding and coastal change' section of the NPPF (para 97). Some of the factors relate to landscape sensitivity and others to visual sensitivity, which are considered as two separate aspects in Topic Paper 6. The consideration of visual sensitivity would include the impact of proposals on people i.e. residents, recreational users and how mitigation has been used to reduce impacts. These factors are the primary focus of this study, and generally relate to the current landscape. The factor of 'landcover change' provides an overview of the degree to which historic patterns in the landscape are still present. Further and more detailed information on the Historic Landscape Character is provided in the Historic Landscape Characterisation Study prepared for Leicestershire and Rutland. It is anticipated that this information would be utilised as part of the Cultural Heritage assessment for any application.

- 3.8 For each Landscape Character Type/Area, a matrix was completed to assess the sensitivity of the key characteristics to wind turbine development. The sensitivity assessment was based on the following 3 point scale:

- **Low sensitivity** – areas where the key characteristics will not be adversely affected by wind turbine development. The landscape would be able to accommodate some windfarm development without a significant impact on its overall character.
- **Moderate sensitivity** – areas where wind turbine development may cause some adverse affect on the key characteristics. There may be some potential to accommodate windfarm development without a significant impact on its character but attention to design, siting and cumulative impact will be required.

- **High sensitivity** - areas where the key characteristics are likely to be adversely affected by wind turbine development. The landscape will not be able to accommodate windfarm development without a significant impact on its character.

3.9 In order to assess the overall sensitivity of each landscape character type to each turbine typology and size of turbine, a 'score' has been assigned to each level of sensitivity - 3 points for high sensitivity, 2 points for moderate sensitivity and 1 point for low sensitivity. The score under the different categories of sensitivity has then been totalled to give an overall sensitivity for each turbine typology and size. No weighting has been given to any of the individual key characteristics. The possible scores that could be achieved for each typology vary from 8 to 24 and these scores have been divided into 3 bands to provide an indication of overall sensitivity, as follows:

High Overall Sensitivity	= 20-24 points
Moderate Overall Sensitivity	= 14-19 points
Low Overall Sensitivity	= 8-13 points

3.10 An example of how the sensitivity matrix and overall sensitivity scores work is provided below in Table 1.

Table 1: Example Sensitivity Matrix

Key characteristics of the landscape area	Single Turbine	Small Scale Group	Small to Medium Scale Group	Medium Scale Group	Large Scale Group
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and Skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	18	21	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Value and Capacity

3.11 Topic Paper 6 recommends a consideration of the value of a landscape, including its aesthetic and perceptual qualities, when defining landscape capacity. The 2002 Guidance also provides some criteria for testing landscape value, including Landscape

Quality, Scenic Quality, Rarity, Representativeness, Conservation Interests, Wildness, Cultural Associations, Tranquillity and Recreational Opportunities. Due to the difficulty of accurately determining landscape value through public consultation and surveys, the preferred option in this study is to utilise existing judgements of local landscape value, as determined by the local landscape designations of Areas of Particularly Attractive Countryside and Areas of Local Landscape Value as defined in the Rutland Local Plan (2001). Landscape value has been attributed to each Landscape Character Type and Sub-Area as follows:

- **Low Landscape Value** – none or very little of the area is covered by either the Areas of Particularly Attractive Countryside and Areas of Local Landscape Value designations
- **Moderate Landscape Value** – part of the area is covered by either the Areas of Particularly Attractive Countryside and Areas of Local Landscape Value designations
- **High Landscape Value** – all or the majority of the area is covered by either the Areas of Particularly Attractive Countryside and Areas of Local Landscape Value designations

3.12 The presence of any local landscape designations is likely to reduce the relative capacity of a landscape character area to successfully accommodate wind turbine development, although as identified in NPS EN-3 local landscape designations in themselves are not a reason to refuse consent. As discussed above, the combination of the overall Landscape Sensitivity with Landscape Value indicates the Landscape Capacity to accommodate development. The methodology worked on the premise that where there was a high sensitivity to turbines then the capacity was always low. Where sensitivity was moderate or low the capacity would vary depending on the Landscape Value as determined by the presence of local landscape designations. It is envisaged that this measure of value will remain valid whether the designations are retained in any Local Plan policies in the future or not. The following matrix was used to combine Landscape Sensitivity and Landscape Value:

Table 2: Landscape Capacity

Overall Landscape Sensitivity	High	Low	Low	Low
	Moderate	Moderate	Moderate	Low
	Low	High	Moderate	Moderate
		Low	Moderate	High
		Landscape Value		

- 3.13 The matrix above utilises a traffic light colouring system, which is followed through in the mapping produced to demonstrate the results of the analysis.

Assessing Turbine Visibility

- 3.14 The visual impact arising from a proposal is generally understood as an impact affecting a 'receptor' or person. This may occur at a variety of locations where receptors are present, e.g. residential dwelling, a public right or way, area of open space, travelling in a car or train or at a place of work. These effects are usually assessed through a Visual Impact Assessment within an Environmental Impact Assessment

- 3.15 There have been a number of studies undertaken that consider the visual impacts of wind turbine development. The former PPS22 and its companion guide highlighted the importance of undertaking visual assessments of all renewable energy developments but provided limited guidance on how this should be undertaken. This guidance is largely continued in the NPSs and the NPPF. These documents also refer to the importance of assessing the cumulative visual impact of successive renewable energy developments. The Scottish Government, however, provides more prescriptive guidance, which is also commonly used when undertaking wind turbine studies in England. Appendix 4 provides detail on the range of guidance provided in relation to visual impact by some of the current wind turbine literature, as well as some more historic references.

- 3.16 PPS22 and much of the other literature identified in Appendix 4 highlight the importance of identifying the Zone of Theoretical Visibility (ZTV) for a turbine development. A Zone of Theoretical Visibility is the extent from which a turbine of a given height could be seen on a very clear day, based on the landform of the area. These studies are usually carried out for visibility to blade tip and to hub height. Dependent on the approach taken the ZTV can also allow for major intervening features such as settlement, built forms and major woodland. However, localised screening is not typically included. The latest guidance on ZTVs is presented in the 2006 document 'Visual Representation of Windfarms: Good Practice Guidance', as prepared for Scottish Natural Heritage. This recommends the following Zones of Theoretical Visibility extents for different sizes of turbines:

- Turbine up to 50m – ZTV 15km
- Turbine 51-70m – ZTV 20km
- Turbine 71-85m – ZTV 25km
- Turbine 86-100m – ZTV 30km
- Turbine 101-130m – ZTV 35km

- 3.17 Although turbines are theoretically visible over all these distances, their visual impact is likely to decrease with distance from the turbine location. The Scottish Executive's former document PAN45: Renewable Energy Technologies indicated a range of distances from turbine development and descriptions of the diminishing magnitude of the visual impact (see Appendix 4). This guidance is not specific about the heights of turbines that this applies to, which can be significant given the variation in ZTVs illustrated above. Through use of the guidance in PAN45, reference to approaches being taken in wind turbine applications, appeal decisions and our own field evaluation work, an assessment has been made of the likely magnitude of visual impact of wind turbines. This has resulted in an additional category of dominant impact being incorporated when compared to PAN45, which also relates to residential visual amenity as discussed below in paragraphs 3.20-3.28. The following table, Table 3, indicates the likely visual impacts used in this study for the large (100m +) turbine height band at different distances from the turbine development.

Table 3: Categories of Magnitude for Visual Impact of Turbines

Distance from turbines	Magnitude of impact	Description
Within 800m	Dominant	Turbines form the principle element of the view and may overpower the viewer.
800m-2km	Prominent	Turbines form a very large element of the view, commanding and controlling the view.
2-5km	Conspicuous	Turbines form a large element of the view, standing out from the surroundings and forming an unmistakable feature within a view.
5-15km	Apparent	Turbines form a medium element of the view, noticeable in panoramas, clearly visible and catching the eye.
15-30km	Inconspicuous	Turbines form a small element of the view that is visible but not distinct or obvious on first glance or in overcast conditions.
Over 30km	Negligible	Turbines form a very small element of the view, barely visible in clear conditions.

3.18 These distances have been calibrated in the field, based on other built wind turbine schemes in the UK. It should also be noted that these definitions apply where there are open or partial views of a wind turbine development. Within Rutland County topography can provide significant screening of turbines, with buildings or planting also able to provide localised screening and reduce visual impacts within the above ranges. These bandings are intended to indicate the approximate point at which the visual effect of a turbine moves from one category to the next. They should therefore not be interpreted too rigidly. Factors such as weather conditions or the relative elevation of turbine to viewer will also influence this transition and a level of professional judgement will be required to reflect the individual circumstances of each site.

3.19 In order to allow for a range of turbine heights, the proportional increases in the maximum ZTV distances recommended in 'Visual Representation of Windfarms: Good Practice Guidance', and set out above at paragraph 3.16, have been applied pro rata to the distances and magnitudes above to indicate the distances and relating magnitudes of visual impact that would apply to different sizes of turbine. The results of this are shown below in Table 4. These distances are a guide and would need to be tested in the field for a specific proposal.

Table 4: Visual Impacts of Turbines Extrapolated for Different Turbine Heights

Magnitude of impact	Distance from turbines						
	Height of turbine	Up to 50m	50-70m	71-85m	86-99m	100-130m	131-c.150m
Dominant		Within 320m	Within 480m	Within 575m	Within 680m	Within 800m	Within 920m
Prominent		320-800m	480m-1.2km	575m-1.4km	680m-1.7km	800m-2km	920m-2.3km
Conspicuous		800m-2km	1.2-2.8km	1.4-3.6km	1.7-4.3km	2-5km	2.3-5.7km
Apparent		2-6.5km	2.8-8.6km	3.6-10.7km	4.3-12.9km	5-15km	5.7-17.1km
Inconspicuous		6.5-12.8km	8.6-17.1km	10.7-21.4km	12.9-25.7km	15-30km	17.1-34.3km
Negligible		Over 12.8km	Over 17.1km	Over 21.4km	Over 25.7km	Over 30km	Over 34.3km

Residential amenity

- 3.20 A further higher threshold specifically affecting the visual component of residential amenity can also be applied to the acceptability of a proposal on those residential locations most affected. This approach to the visual component of residential amenity is not specifically covered in any national guidance, but is identified in NPS EN-3. (NB Other aspects of residential amenity e.g. noise and shadow flicker are outside the scope of this report)
- 3.21 Analysis of recent wind farm appeal decisions indicates that a common threshold criterion applied by inspectors for assessing visual residential amenity is where the change in the view would affect the fundamental living conditions. Various terms have been used to describe this threshold e.g. 'overbearing', 'overwhelming', 'overpowering' or 'oppressive'. This threshold may often be higher than the point at which a visual impact is assessed to be a 'significant' adverse impact in EIA terms. A number of decision letters on wind turbines proposals have helped to provide some broad principles and examples to illustrate the point at which an impact, although significant, then becomes unacceptable. It is important to underline that the following extracts are based on individual cases and do not reflect any agreed national standards or institute endorsed methodology. Each case should still be judged on their own merits and take account of the baseline situation and degree of change that would occur.
- 3.22 In the Enifer Downs Inquiry decision (APP/X2220/A/08/2071880) Inspector Lavender described a threshold for unacceptable effects as (para 66):
"when turbines are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden", such that "the property concerned would come to be regarded as an unattractive and thus unsatisfactory (but not uninhabitable) place in which to live", before stating that: "It is not in the public interest to create such living conditions where they did not exist before".
- 3.23 The above quote is helpful in identifying criteria to consider what could result in an overwhelming effect occurring and also showing how an impact from a development on private residential amenity can also affect the public interest. The above approach would endorse the inclusion of views from gardens as part of an assessment of residential amenity.
- 3.24 In terms of distance from turbines where the effects are considered unacceptable, there is a range of advice coming from inspectors. It should be remembered that the circumstances will vary in terms of location, topography, vegetation and character which would influence to some measure these distances. The height of the turbines and their relative elevation compared to the receptor is also an important factor. Based on a number of decision letters, it is noted that at more than c. 1.5km there is unlikely to be an overwhelming impact. At Carsington (2008), where 4 No. 100m turbines were proposed, the inspector stated at paras 106-107:
"Although some properties would be subject to significant effects, albeit only through certain windows, none would have their outlook so affected in the round that living conditions for their occupants would be unacceptably degraded. Some views would be changed, but those changes do not necessarily equate to harm; none of the properties would be so close, or with such direct views to the site, that the turbines could reasonably be seen as oppressive or overbearing. I confirmed this by looking at the site from some of the closest properties and those likely to be most directly affected ... In both cases the turbines would be very prominent in views ... but at a distance of 1-1.3kms I do not judge their effects to be disproportionate in the overall outlook ... Those effects would not in my opinion seriously undermine resident's living conditions."

- 3.25 The decision at Enifer Downs, Dover (2009) is one decision that clearly identified unacceptable effects on residential amenity. This was a proposal for 5 No. 120m turbines, and the inspector states at (para 71):
“Where the full height and maximum spread of turbines would be seen from closest to (typically at up to about 800m), and with little or nothing by way of intervening screening, it is my conclusion that living conditions would be demonstrably harmed by significant and over-dominant visual impact. There would be conflict with the relevant SP and LP policies safeguarding against un-neighbourly development”.
- 3.26 In terms of the number of properties that may be affected, the decision letter from Sillfield, Gatebeck, Kendal (APP/M0933/A/09/2099304) provides the following statement:
‘Nor is the scale of harm to living conditions necessarily directly related in some utilitarian way to the number of properties concerned so that if relatively few properties are affected it can be concluded that the harm is acceptable. The degree of harm in individual cases is important and again this becomes a matter to be weighed in the balance of pros and cons of the proposal.’
- 3.27 In the Sillfield case there were five properties where the inspector identified there would be a significant effect on the residential amenity conditions. These included a range of situations and differing types of impact both from within and outside of properties.
- 3.28 Assessment of the impact on residential amenity is now more typically carried out as a Residential Amenity Study that can form part of an EIA.

4 Landscape Capacity and Cumulative Impact

Landscape character

- 4.1 The Rutland Landscape Character Assessment, 2003, identifies five different Landscape Character Types containing a total of twelve Landscape Character Sub Areas, as follows:

Landscape Character Type	Landscape Character Sub Area
A. High Rutland	Ai. Leighfield Forest Aii. Ridges and Valleys Aiii. Eyebrook Valley Aiv. Chater Valley
B. Vale of Catmose	B. Vale of Catmose
C. Rutland Water Basin	C. Rutland Water Basin
D. Rutland Plateau	Di. Cottesmore Plateau Dii. Clay Woodlands Diii. Gwash Valley Div. Ketton Plateau
E. Welland Valley	Ei Middle Valley West (Caldecott - Seaton) Eii. Middle Valley East (Barrowden - Tinwell)

- 4.2 During field work for the study, further sub-divisions of some of the Landscape Character Sub Areas (as noted above) were identified in relation to their relative suitability for wind turbine development. These further subdivisions were based on the particular combination of key characteristics present and whether these represented a different suitability for wind turbine development to other parts of the Sub Area. This process resulted in the following modifications (as illustrated on Figure 02):

- *Sub-division of Aii. Ridges and Valleys into Aii (north): Ridges and Valleys – Whissendine Plateau and Aii (south): Ridges and Valleys*
This sub division was justified as the rural area around Whissendine has a less pronounced landform than the remainder of the area and is more open in character. The settlement pattern is also relatively nucleated around Whissendine itself with other areas less settled. The new boundary relates to a tributary valley feature that forms an extension to the Vale of Catmose and separates the two parts of area Aii.
- *Sub-division of Di. Cottesmore Plateau into Di (north): Cottesmore Plateau and Di (south): Cottesmore Plateau – Exton and Burley*
The northern part of area Di, which includes the former Cottesmore Airfield, is part of an expansive plateau and much more open in character comprising large arable fields and limited woodland cover. It also contains a higher proportion of modern development and is heavily influenced by the airfield and associated structures and development. The boundary with the southern areas reflects the extent of the wooded estates and more intact historic landscapes to the south.
- *Movement of the northern and western part of Dii. Clay Woodlands into Di (south): Cottesmore Plateau – Exton and Burley*
The northern and western parts of area Dii contain much more woodland cover than the southern area and are of a smaller more intimate scale. These areas also have a more historically intact character feel and are also mainly covered by the Area of Particularly Attractive Countryside designation. As such the northern and western parts share many more characteristics with Di (south): Cottesmore Plateau – Exton and Burley than with Dii. The boundary chosen reflects the extent of the Area of Particularly Attractive Countryside designation, which partly follows the alignment of the A1.

- 4.3 Appendix 5 contains a summary of the key characteristics for each of these Landscape Character Sub Areas, along with the Aims and Objectives sections for each Landscape Character Sub Area as identified in the Countryside Design Guidance for Rutland SPG.

Landscape sensitivity

- 4.4 Following the methodology highlighted in Section 2, paragraphs 2.4-2.10, matrices have been completed for the fourteen different Landscape Character Sub Areas. The detailed analysis of landscape sensitivity against the various landscape factors is located in Appendix 6. A summary of the landscape sensitivity for each turbine typology and each size of turbine within the fourteen Landscape Character Sub Areas is provided below, in Tables 5-7.
- 4.5 The assessment of the sensitivity criteria within each Landscape Character Sub Area reflects a judgement for the whole area. Landscape Character does not always change markedly at a boundary and there may be a degree of transition between areas. There can also be a visual influence from a development in one area into adjacent Character Sub Areas and these effects should form a material part of the assessment of landscape and visual effects.
- 4.6 It is also possible that there will be some more local variation within a Character Area or Sub Area which could affect the relative sensitivity. These local variations should be considered as part of the Landscape and Visual Impact Assessment for an individual planning application. The descriptions from the Countryside Design Guidance can assist in identifying local variations in character.

Table 5: Landscape Sensitivity to Small turbines (up to 50m)

Landscape Character Area	Overall Sensitivity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Moderate	Moderate	High	High	High
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	High	High	High
Aii (south): Ridges and Valleys	Moderate	Moderate	High	High	High
Aiii: Eyebrook Valley	Moderate	Moderate	High	High	High
Aiv: Chater Valley	Moderate	Moderate	High	High	High
B: Vale of Catmose	Moderate	Moderate	High	High	High
C: Rutland Water Basin	Moderate	Moderate	High	High	High
Di (north): Cottesmore Plateau	Low	Low	Low	Moderate	High
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	Moderate	High	High	High
Dii: Clay Woodlands	Low	Low	Moderate	High	High
Diii: Gwash Valley	Moderate	Moderate	High	High	High
Div: Ketton Plateau	Low	Moderate	Moderate	High	High
Ei: Middle Valley West (Caldecott-Seaton)	Moderate	Moderate	High	High	High
Eii: Middle Valley East (Barrowden-Tinwell)	Moderate	Moderate	High	High	High

Table 6: Landscape Sensitivity to Medium turbines (50-99m)

Landscape Character Area	Overall Sensitivity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Moderate	High	High	High	High
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	High	High	High
Aii (south): Ridges and Valleys	Moderate	High	High	High	High
Aiii: Eyebrook Valley	Moderate	Moderate	High	High	High
Aiv: Chater Valley	High	High	High	High	High
B: Vale of Catmose	Moderate	Moderate	High	High	High
C: Rutland Water Basin	Moderate	High	High	High	High
Di (north): Cottesmore Plateau	Low	Low	Moderate	High	High
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	High	High	High	High
Dii: Clay Woodlands	Low	Moderate	Moderate	High	High
Diii: Gwash Valley	High	High	High	High	High
Div: Ketton Plateau	Low	Moderate	Moderate	High	High
Ei: Middle Valley West (Caldecott-Seaton)	High	High	High	High	High
Eii: Middle Valley East (Barrowden-Tinwell)	High	High	High	High	High

Table 7: Landscape Sensitivity to Large turbines (100m +)

Landscape Character Area	Overall Sensitivity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	High	High	High	High	High
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	High	High	High	High
Aii (south): Ridges and Valleys	High	High	High	High	High
Aiii: Eyebrook Valley	High	High	High	High	High
Aiv: Chater Valley	High	High	High	High	High
B: Vale of Catmose	Moderate	High	High	High	High
C: Rutland Water Basin	High	High	High	High	High
Di (north): Cottesmore Plateau	Low	Moderate	Moderate	High	High
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	High	High	High	High	High
Dii: Clay Woodlands	Moderate	Moderate	Moderate	High	High
Diii: Gwash Valley	High	High	High	High	High
Div: Ketton Plateau	Moderate	Moderate	Moderate	High	High
Ei: Middle Valley West (Caldecott-Seaton)	High	High	High	High	High
Eii: Middle Valley East (Barrowden-Tinwell)	High	High	High	High	High

Landscape value

- 4.7 Following the methodology highlighted in Section 3, paragraphs 3.11 and 3.12, the landscape value for each Landscape Character Sub Area has been calculated and is summarised below, in Table 10. This is predominantly based on the relative presence or absence of Landscape Designations. See Appendix 6 for further detail.

Table 10: Landscape Value

Landscape Character Type	Landscape Value
Ai: Leighfield Forest	High
Aii (north): Ridges and Valleys – Whissendine Plateau	Low
Aii (south): Ridges and Valleys	High
Aiii: Eyebrook Valley	High
Aiv: Chater Valley	High
B: Vale of Catmose	Moderate
C: Rutland Water Basin	High
Di (north): Cottesmore Plateau	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate
Dii: Clay Woodlands	Low
Diii: Gwash Valley	Moderate
Div: Ketton Plateau	Moderate
Ei: Middle Valley West (Caldecott-Seaton)	High
Eii: Middle Valley East (Barrowden-Tinwell)	High

Landscape capacity

- 4.8 Following the methodology highlighted in Section 3, paragraphs 3.11-3.13, the landscape capacity for each Landscape Character Sub Area has been assessed and is summarised below, in Tables 9-11, under each of the turbine typologies and each size of turbine. These results are also illustrated on Figures 04-18. This capacity is the overall capacity of each Landscape Character Sub Area to accommodate the change that is likely to result from the introduction of wind turbines. It is possible that there may be local variations, including the presence of topographical features, vegetation, settlement that may modify the capacity within a particular Landscape Character Sub Areas.

Table 9: Landscape Capacity for Small turbines (up to 50m)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Moderate	Moderate	Low	Low	Low
B: Vale of Catmose	Moderate	Moderate	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	High	High	Moderate	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	Moderate	Low	Low	Low
Dii: Clay Woodlands	High	High	Moderate	Low	Low
Diii: Gwash Valley	Moderate	Moderate	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

Table 10: Landscape Capacity for Medium turbines (50-99m)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Moderate	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Low	Low	Low	Low	Low
B: Vale of Catmose	Moderate	Moderate	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	High	Moderate	Low	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Moderate	Low	Low	Low	Low
Dii: Clay Woodlands	High	Moderate	Moderate	Low	Low
Diii: Gwash Valley	Low	Low	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

Table 11: Landscape Capacity for Large turbines (100m +)

Landscape Character Area	Landscape Capacity				
	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Ai: Leighfield Forest	Low	Low	Low	Low	Low
Aii (north): Ridges and Valleys – Whissendine Plateau	Moderate	Low	Low	Low	Low
Aii (south): Ridges and Valleys	Low	Low	Low	Low	Low
Aiii: Eyebrook Valley	Low	Low	Low	Low	Low
Aiv: Chater Valley	Low	Low	Low	Low	Low
B: Vale of Catmose	Moderate	Low	Low	Low	Low
C: Rutland Water Basin	Low	Low	Low	Low	Low
Di (north): Cottesmore Plateau	High	Moderate	Moderate	Low	Low
Di (south): Cottesmore Plateau – Exton and Burley (inc. part of Dii)	Low	Low	Low	Low	Low
Dii: Clay Woodlands	Moderate	Moderate	Moderate	Low	Low
Diii: Gwash Valley	Low	Low	Low	Low	Low
Div: Ketton Plateau	Moderate	Moderate	Moderate	Low	Low
Ei: Middle Valley West (Caldecott-Seaton)	Low	Low	Low	Low	Low
Eii: Middle Valley East (Barrowden-Tinwell)	Low	Low	Low	Low	Low

Cumulative landscape impacts

- 4.9 The Scottish Natural Heritage Document 'Cumulative Effect of Windfarms' identifies a number of factors that should be considered in relation to the cumulative effect of a proposed wind turbine development in relation to other existing or proposed wind turbine developments. The cumulative effect relates to the combined impact of separate wind turbine developments on a landscape, as identified in NPS EN-1. Factors to be considered in relation to Rutland County include the effects on the following: landscape character, sense of scale, sense of distance, existing focal points in the landscape, skyline, sense of remoteness and wildness, and other special landscape interests.
- 4.10 The character of the landscape within Rutland County is varied, with areas of pronounced ridges and valleys contrasting with wider valley features of the Vale of Catmose and the Welland Valley. There are also landscape designations in the form of the Areas of Particularly Attractive Countryside and Areas of Local Landscape Value as defined in the Rutland Local Plan (2001). It is important to look at the characteristics and objectives of the Landscape Character Sub Areas within Rutland and identify objectives in line with these, so that the character of the landscape is at least maintained and where possible enhanced.
- 4.11 Within Rutland County, as identified in the Landscape Character Assessment, the Recommended Landscape Objectives for most landscapes is to 'conserve', 'sustain' or 'reinforce' the most important features and 'restore', 'enhance' or 'manage' the parts that weaken the strength of character or the condition of the landscape. The exception to this would be Rutland Water Basin where the Recommended Landscape Objectives include 'to encourage the continued maturity and evolution of the modern reservoir landscape'. This suggests that there is not a need to create a new landscape character within Rutland and that a suitable objective for Rutland, in landscape character terms, would be to retain the landscape without the presence of excessive major vertical elements. As such there is no Landscape Character Area within the County where wind turbines should be allowed to become a key characteristic, as a result of the cumulative impact of numerous wind turbine developments.

Visual impacts

- 4.12 The visual impacts of existing wind turbine developments within and close to Rutland County is currently very limited. As discussed in Section 1 there are only small scale turbines currently constructed within the County. Visual impacts can be wide ranging and can have a significant amenity impact on a wide range of groups including: residents, recreational uses of open space and rights of way, workers, travellers and visitors. Some areas of the Rutland landscape are relatively flat and open, while others include prominent ridgelines. As a result it is frequently possible to see over long distances and as such Zones of Theoretical Visibility would result in some extensive impacts up to the limits of the ZTV. However, due to the relative suitability of some Landscape Character Sub Areas to accommodate a measure of wind turbine development the visual impact of turbines over greater distances, typically over 5km from the site may not seem out of context or scale.
- 4.13 However, the impact on views in the landscape is typically more significant where the wind turbines are within 5km of the viewer. It is also important to consider the impact that turbines can have on established views within Rutland. There are important views within the County that should be protected from the visual intrusion of wind turbine development. These would e.g. include vistas within historic parks and gardens. Other important views to preserve include those towards church spires and towers, which form landmarks in the landscape, and views along the corridor of

the Welland and Gwash that are also important in landscape terms and should be safeguarded from adverse impacts.

- 4.14 There are also features that can potentially screen views of turbine developments and that could potentially mitigate their visual impacts. These features include vegetation and built form, in addition to topography, and the distance from a viewer that they would have to be in order to screen or be more in scale with views of a wind turbine.

Cumulative visual impacts

- 4.15 NPS EN-1 identifies the potential for cumulative visual impacts. The Scottish Natural Heritage Document 'Cumulative Effect of Windfarms' identifies 3 types of cumulative visual impact (those between a proposed wind turbine development in relation to other existing or proposed wind turbine developments). These are:

- Combined/simultaneous impact – *“occurs where the observer is able to see two or more developments from one viewpoint, without moving his or her head”*, which is considered by Scottish Natural Heritage to be equal to a 90 degree arc of view. This includes for the main focus of view (central 50 degree arc) and peripheral vision in the same view.
- Successive/repetitive impact – *“occurs where the observer is able to see two or more windfarms from one viewpoint but has to move his or her head to do so”*, considered by Scottish Natural Heritage to be a 180-360 degree arc of view. It is considered for this study that development between 90 and 180 degrees also falls within the successive category.
- Sequential impact – *“occurs when the observer has to move to another viewpoint to see other developments or a different view of the same development”* e.g. travelling along a road.

- 4.16 Turbines within c. 1.6km (turbines under 50m height), c. 2.4-3.4km (for 51-99m height turbines) and c. 4km (for turbines at 100m and above) of each other can be read easily in the same view from many locations. These distances are where the Prominent zones of visibility (as identified in Table 4 on page 19) of different wind turbines overlap e.g. the 2km outer extent of one turbine at 100m height and above overlaps with the 2km outer extent of another turbine in the same size category. As such they are likely to demonstrate a significant cumulative impact from a number of locations and unlikely to be considered acceptable in visual/landscape terms, unless they form a relatively modest extension to an existing turbine development. Turbines within 10km of each other, i.e. where the 'Conspicuous' zones of visibility overlap, could also have a noticeable cumulative visual impact. These impacts may be in terms of combined impact or successive impact.

- 4.17 In order to minimise Combined/Simultaneous impacts and Successive/Repetitive impacts it is considered desirable to limit the extent of turbine visibility within a given field of view and different aspects. This will help to prevent residential properties becoming enclosed by turbines and avoid the feeling of living within a windfarm landscape or windfarm landscape sub type.

- 4.18 The effect of sequential cumulative visual impact on receptors from roads, rail or rights of way from multiple wind turbine development should be carefully assessed particularly within the prominent and conspicuous zones of visual impact of the developments.

- 4.19 Scottish Natural Heritage guidance on the 'Cumulative Effect of Windfarms' indicates in its Appendix 5 that when assessing the sequential impact of turbines on a route the following should be considered:

- direction of view ('direct', 'oblique', 'aligned on route', or 'looking NW of route' etc.);
- distance from nearest turbine;
- the number of turbines visible at each windfarm development; and
- which parts of the turbines are visible at each development (e.g. blade tips, hubs, upper towers or full towers).

4.20 As with non-cumulative visual impacts, there are a number of factors that may reduce the cumulative visual impact of turbines. These could include topography, vegetation or built form, with roads that pass through urban areas likely to be less influenced by cumulative impacts than roads passing through open countryside.

5 Guidelines for assessing future applications

- 5.1 The following landscape and visual criteria and thresholds should be applied for all future wind turbine proposals. These factors should be considered alongside all other factors that relevant to a wind turbine development, as identified in the RCC Supplementary Planning Document, and therefore form one albeit important aspect of the overall considerations.
- 5.2 The criteria should initially be applied at the Scoping Opinion stage and then if the scheme progresses through a full Planning Application and supporting Environmental Statement. Environmental Statements should provide detailed assessments of all the landscape and visual factors outlined below. The assessment should be carried out in accordance with the current version of 'Guidelines for Landscape and Visual Impact Assessment' (The Landscape Institute and Institute of Environmental Management and Assessment). Assessments should include an indication as to the 'nature of the effects' i.e. whether they are adverse, neutral or beneficial. The assessment will be reviewed as part of the decision making process, alongside the recommendations of all consultees.
- 5.3 It is highly recommended that decision makers including officers and members are familiar with the scale and character of wind turbine schemes before applications are determined. This should involve site visits to comparable (in terms of scale, number and host landscape character) built schemes viewing them in the field from a range of representative locations. It is also highly recommended that decision makers view any photomontages in the field and in accordance with any viewing instructions provided.
- 5.4 For schemes that do not require a full Environmental Statement the Local Authority may still require the applicant to submit a Landscape and Visual assessment of the proposals for the application. The scope of this will be determined by Local Authority on a case by case basis.
- 5.5 Non-compliance with an individual criterion should not necessarily preclude turbine development but is likely to count against the scheme in the balance of benefits against harm. All the factors and any harm arising should be carefully evaluated and then balanced by the planning authority against the requirements to contribute to regional and national targets for renewable energy generation and the benefits of reducing carbon consumption. The criteria and thresholds should also always be considered in conjunction with a detailed study of the site and its surroundings, particularly in terms of existing patterns of landform, vegetation, buildings and other structures that may provide local mitigation of a wind turbine development.

1. Landscape character – does the proposal respect and fit with the key characteristics of the landscape character area within which it is sited? Has reference been made to the Countryside Design Guidance for Rutland SPG?

Relevant thresholds and criteria

- a) Key characteristics of the landscape character areas within Rutland County are identified in Appendix 5.
- b) Further guidance on the form and siting of turbine developments is provided in 6.5 below.

2. Landscape capacity – what is the capacity of the landscape character area/type to accommodate the scale of wind turbine development proposed?

Relevant thresholds and criteria

(Refer to Figures 4-18 and Tables in Appendix 6 for each Landscape Character Sub Area described below)

- a) **The Leighfield Forest Landscape Character Sub Area (Ai)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas needs to be carefully considered.
- b) **The Ridges and Valleys – Whissendine Plateau Landscape Character Sub Area (Aii-north)** has moderate capacity to accommodate up to small scale groups of medium (50-99m) turbines and single large (100m+) turbines. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- c) **The Ridges and Valleys Landscape Character Sub Area (Aii-south)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas also needs to be carefully considered.
- d) **The Eyebrook Valley Landscape Character Sub Area (Aiii)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas also needs to be carefully considered.
- e) **The Chater Valley Landscape Character Sub Area (Aiv)** has low capacity to accommodate all scales and sizes of turbine. The impact of wind turbine development in adjacent Landscape Character Sub Areas needs to be carefully considered.
- f) **The Vale of Catmose Landscape Character Sub Area (B)** has some capacity to accommodate single turbines of all sizes and small groups (2-5) of small or medium sized turbines. It would be difficult to accommodate small to medium (6-11), medium (12-16) or large turbine groups (17+) in this landscape. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- g) **The Rutland Water Basin Landscape Character Sub Area(C)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas needs to be carefully considered.
- h) **The Cottesmore Plateau Landscape Character Sub Area (Di-north)** has capacity to accommodate all sizes of turbine development. It has capacity to accommodate groups up to 16 in the small (up to 50m) turbine size and capacity for groups up to 11 in the medium (20-99m) and large (100m+) sizes. It would be difficult to accommodate groups of more than 11 medium to large turbines. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- i) **The Cottesmore Plateau – Exton and Burley Landscape Character Sub Area (Di –south)** has some capacity to accommodate single turbines of small or medium sized turbines and small groups (2-5) of small turbines. It would be difficult to accommodate small to medium (6-11), medium (12-16) or large turbine groups (17+) in this landscape. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- j) **The Clay Woodlands Landscape Character Sub Area (Dii)** has capacity to accommodate all sizes of turbine development. It would be difficult to

accommodate groups of more than 11 turbines of all sizes. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.

- k) **The Gwash Valley Landscape Character Sub Area (Diii)** has some capacity to accommodate single turbines and small groups (2-5) of small turbines. It would be difficult to accommodate small to medium (6-11), medium (12-16) or large turbine groups (17+) in this landscape, as well as medium (50-99m) and large (100m+) sized turbines. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- l) **The Ketton Plateau Landscape Character Sub Area (Div)** has some capacity to accommodate single turbines, small groups (2-5) and small to medium (6-11) groups of all turbine sizes. It would be difficult to accommodate medium (12-16) or large turbine groups (17+) in this landscape. The cumulative impact of wind turbine development on this landscape and the impact of wind turbine development in adjacent Landscape Character Sub Areas need to be carefully considered.
- m) **The Middle Valley West (Caldecott – Seaton) Landscape Character Sub Area (Ei)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas needs to be carefully considered.
- n) **The Middle Valley East (Barrowden – Tinwell) Landscape Character Sub Area (Eii)** has low capacity to accommodate all scales and sizes of wind turbine development. The impact of wind turbine development in adjacent Landscape Character Sub Areas needs to be carefully considered.

3. Visual impacts – will the proposal have an unacceptable impact on views? Is the proposal located too near to existing built up areas and individual properties? Will the proposals impact on important views from publicly accessible locations? Has the applicant provided sufficient photomontages and wire frame views from agreed key viewpoints?

Relevant thresholds and criteria

- a) Proposals within the dominant zone of any property are highly unlikely to be considered acceptable in visual terms, unless existing features can be proven to fully screen views of the turbines.
- b) Proposals within the prominent zone of any settlement will need to be carefully considered as turbines are highly likely to be prominent features and command/control views for sensitive viewers, including residential properties, within this range. Existing features including built form and vegetation may be able to locally reduce visual impacts of turbines within this range.
- c) Locations for a full range of 'representative' and any 'specific' viewpoints for the assessment of the visual impacts should be agreed with Rutland County Council prior to the preparation of Environmental Statements and submission of a turbine application. Viewpoints should include a range of receptor locations including residential locations, open space, public roads, rights of way and promoted/published routes. Micro siting of the locations should ensure that the viewpoints represent the worst case impacts, e.g. not screened by short local section of hedge. A range of differing distances from the proposed development, with good coverage within a 5km range should be provided.
- d) Residential properties and users of recreational routes/facilities are likely to be considered more sensitive as receptors. Main road/rail users and industrial areas are likely to be considered relatively less sensitive.

- e) Photomontages and Wireframes should be produced for the agreed viewpoints fully in accordance with the guidance in current best practice i.e. 'Visual Representation of Windfarms Good Practice Guidance' (Scottish Natural Heritage) (NB image heights should be to preferred height of 200mm) or 'Visualization Standards for Wind Energy Developments' (Highland Council)
- f) A detailed Residential Amenity Study (RAS) covering visual amenity effects for properties shall be produced within the following distances of a proposed turbine: Small turbines (up to 50m height) 750m distance, Medium turbines (50-100m height) 1000m distance, Large turbines (100m + height) 1200m distance. These residential visual amenity distances have been derived from a range of previous Inspectors' decisions, as discussed in Section 3 of this study, and subsequently vary from the separate visual impact distances (covering a full range of receptor types) identified in Table 4 on page 19. The RAS should consider for any property experiencing a 'significant' visual impact in EIA terms the following factors: distance, number of turbines, orientation and layout of the dwelling and garden areas, arc of view affected, vertical field of view affected, and existing character of the view including any screening features. The purpose of the RAS is to determine if there are any 'unavoidable and overbearing' effects.

4. Cumulative landscape impacts – has the landscape character area/type reached the limit of its capacity when existing and consented turbine developments are taken into account? There is danger that excessive development of wind turbines in any landscape would at some point result in such material change as to unbalance and overpower the existing key characteristics of the landscape.

Relevant thresholds and criteria

- a) A cumulative assessment study allowing for other operational, consented or schemes currently in the planning system should be carried out within 10 km of the proposal.
- b) A range of Wireframes and Photomontages shall be produced from agreed viewpoints to demonstrate cumulative effects. This may include some additional locations to the representative or specific viewpoints described above.
- c) Cumulative landscape impacts shall be compliant with the overall local landscape capacity and not result in any unacceptable landscape harm.

5. Cumulative visual impacts – how far is the development from existing turbine developments? Will the proposal increase the combined/simultaneous, successive/repetitive and sequential visibility of turbine development in the area?

Relevant thresholds and criteria

- a) Proposals for new wind turbine development within 1.6km (turbines under 50m height), c. 2.4-3.4km (for 51-99m height turbines) and c. 4km (for turbines at 100m and above) of existing turbine developments are unlikely to be acceptable in visual/landscape terms unless they are designed to appear as part of a coherent extension of an existing group or do not result in any unacceptable visual harm including impacts on residential locations.
- b) Proposals for new wind turbine development within 10km of existing turbine developments will need to be carefully considered in terms of combined, successive and sequential cumulative impact from residential locations and publicly accessible locations to assess any significant effects that arise.

6. Recreation and Transport Routes – are the proposals far enough away from public open space, footpaths and bridleways? Are the proposals far enough away from A-roads, railways and power lines?

Relevant thresholds and criteria

- a) The Companion Guide to PPS22 quotes the British Horse Society's guidance that turbines should not be located within 200m of a bridleway to avoid frightening horses. The British Horse Society has subsequently revised this advice and consequently turbines should be located four times the overall height of turbines for National Trails and Ride UK routes, as these are likely to be used by equestrians unfamiliar with turbines, and a distance of three times overall height from all other routes, including roads.
- b) The layout of turbine developments should also comply with the Companion Guide to PPS22 in relation to rights of way. Turbine blades should not oversail public rights of way and should preferably be their fall over distance away. Ideally turbines should be set back a minimum distance of 200m from public footpaths.
- c) Applicants should have early consultation with the Highways Agency, local highways authority and Network Rail/the Network Property Board to ensure they are following the latest and most up to date guidance. Turbines should be set back from roads, railways and power lines by at least fall over distance.

7. Mitigation – to what extent does the proposal help reinforce the local landscape character and enhance the condition of the landscape? To what extent have the impacts of the proposals been reduced?

Relevant thresholds and criteria

- a) All turbines within a group should be of the same appearance and size to create visual harmony. This should apply to 'extension' of existing sites or proposals which are visually read as part of an existing group
- b) Layout of turbines in 'extensions' of existing sites, or proposals which are visually read as part of an existing group, should be compatible to create a pattern of overall order, structure and conformity.
- c) Turbines should be coloured off-white or light grey to minimize visual impacts in the most prevalent weather and lighting conditions. The lower section of towers could include subtle graduated banding to visually 'ground' the structures. This will be dependent on the location.
- d) No advertising logos should be provided on turbines
- e) A three bladed wind turbine with a solid, tapering tower is generally considered the most elegant form. It is appreciated that some smaller turbines may include a twin blade.
- f) Ancillary clutter relating to the turbines should be housed within the turbine structure as far as possible. Any structures should be constructed from materials that are local to and in harmony with the area.
- g) Where appropriate planting proposals within the application area should be included as part of the proposed schemes to mitigate landscape and visual impacts, in accordance with NPS EN-1. Proposals should be in keeping with the character and strategy for management of the landscape. Offsite planting by agreement (Unilateral Undertaking or Section 106 Agreement) should also be considered to mitigate impacts on individual residential locations or key views

Guidance on Form and Siting

5.6 Where wind turbine development is considered appropriate in the light of the above criteria then the form and siting of the turbines should relate to the characteristics of the landscape character area in which it is situated, in accordance with NPS EN-1. In addition the following principles should apply:

- Single turbines should where possible relate to existing agricultural or industrial buildings
- Layouts for turbine groups in the open countryside should relate to the landform and field pattern of each character area. In Rutland this will typically involve clusters rather than linear or grid arrangements.
- Turbines should be arranged to minimise the effects of overlapping blades (stacking) from sensitive locations or receptors
- Impacts on sensitive skylines should be minimised and medium and large turbines should be set back from plateau edges
- Turbines should be located sufficiently far from settlements to avoid the turbines dominating the settlements and appearing out of scale. This will include impacts on the built character of the settlements and associated open spaces and the impacts on residential locations
- Turbines should not result in any overbearing and unavoidable impacts on individual residents
- Turbines should be located to avoid visual clutter with existing vertical elements in the landscapes, such as pylons/overhead wires and existing turbine groups.
- Views to or from existing landmark or historic features, e.g. church spires, vistas or panoramas associated with parks and gardens should be carefully considered to avoid visual conflict.
- Cumulative impacts with any existing consented or scheme in the planning system should be carefully considered to avoid any significant impacts.

APPENDIX 1

Application number	Scheme	Decision	Easting	Northing
APP/2011/0557	2 No. 11kW turbines, 18.3m to hub, 24.5m to blade tip	Approved	488223	315028
APP/2012/0124	2 No. turbines, up to 60m to hub, 100m to tip	Pending	498960	306253
FUL/2003/0357	2 No. turbines with maximum hub height of 60m, 95m to blade tip	Withdrawn	499086	306122
FUL/2006/0983	1 No. 1kW turbine (no further details)	Approved	483247	300114
FUL/2006/0997	1 No. domestic turbine (no further details)	Approved	483366	314045
FUL/2006/1277	1 No. 20kW turbine (no further details)	Approved	485641	309566
FUL/2007/0373	Erection of dwellings including 1 No. 15m turbine (no further details)	Approved	492564	301398
FUL/2007/0722	1 No. turbine (no further details)	Approved	483463	305842
FUL/2008/0152	1 No. small wall mounted wind turbine (no further details)	Approved	493422	303318
FUL/2008/0634	1 No. 10kW vertical axis wind turbine (no further details)	Approved	498653	304535
FUL/2008/0741	1 No. micro-turbine (no further details)	Approved	485867	308582
FUL/2009/0856	1 No. 7.3m 1kW vertical axis turbine	Approved	491539	305086
FUL/2009/0932	1 No. 2.5kW wind turbine, 11m to hub, 14.5m to blade tip	Approved	494346	301153
FUL/2010/0447	1 No. 11kW wind turbine, 27m to hub, 33.7m to blade tip	Approved	492519	301507

APPENDIX 2

Melton Borough Council

The Melton Local Plan, 1999

Renewable Energy Development

- 13.34 *Renewable energy is a term used to describe a variety of naturally occurring conditions which include the movement of wind, sea and rivers and heat from the sun which can be harnessed to produce power. It is also used to cover energy extracted from a variety of waste and vegetable materials.*
- 13.35 *In the Department of Energy Paper 62-' New And Renewable Energy: Future Prospects In The UK' (March 1994), the Government has established policies to stimulate the exploitation and development of renewable energy resources wherever they have prospects of being economically attractive and environmentally acceptable. The main thrust of the policy is to bring about a reduction in the emission of CO2 and other greenhouse gases which contribute to global warming. Planning Policy Guidance Note No.22 "Renewable Energy" advises local authorities to consider both the immediate impact of renewable energy projects on the local environment and their wider contribution to reducing emissions of green house gases in formulating policies in development plans. In March 1996, ETSU published the East Midlands Renewable Energy Planning Study: Leicestershire County Report. The Study examines the renewable energy resources in the County, paying particular attention to the formulation of strategic policies and a strategy for the exploitation of renewable energy resources.*
- 13.36 *Many forms of renewable energy production are now well developed. Existing schemes in the UK include the harnessing of power from hydro- plants, wind farms, energy recovery from landfill gas and waste incineration.*

Potential for Renewable Energy Schemes in the Plan Area Wind Power

- 13.37 *Renewable energy schemes usually occur where resources are available. In the national context wind power appears to offer the most potential for commercial exploitation as a source of electricity. Wind turbines generally need to be located in exposed rural areas with high annual mean wind speeds. The typical height of a commercial wind turbine is 30-35 metres with a rotor diameter of 25-35 metres.*
- 13.38 *The Plan area is unlikely to be attractive for the development of large scale wind farms as local annual mean wind speeds are relatively low compared to many parts of the country. However, as technology improves, demands could arise for individual, smaller sized machines for private users such as farmers and small rural industries.*

Other Forms of Power Production

- 13.39 *The Ministry of Agriculture, Fisheries and Food (MAFF) has suggested that some 1,200 hectares (3,000 acres) of farm land in the Borough is likely to become "set aside" over the Plan period as a result of European agricultural policies.*
- 13.40 *Animal slurry and fuel crops (eg. coppiced wood and straw) can be used for electricity production through incineration. The need to diversify farming activities as a result of changing technology and policies is becoming more urgent and could lead to the development of small combustion plants in rural areas like Melton.*
- 13.41 *Whilst wishing to encourage the production of renewable energy, the Council is concerned to ensure that any proposal to develop land for renewable energy production does not cause unnecessary visual intrusion in the open countryside, especially in the "Area of Particularly Attractive Countryside". The following policy will therefore apply:-*

UT7 PLANNING PERMISSION WILL BE GRANTED FOR DEVELOPMENT FOR RENEWABLE ENERGY PRODUCTION PROVIDED:-

- a) **THERE WOULD BE NO SIGNIFICANT ADVERSE EFFECTS ON THE APPEARANCE OR CHARACTER OF THE LOCALITY;**

- b) THE DEVELOPMENT WOULD NOT CAUSE LOSS OF AMENITIES THROUGH UNACCEPTABLE NOISE, SMELL, VIBRATION, DUST OR OTHER FORMS OF POLLUTION;*
- c) THERE WOULD BE NO SIGNIFICANT ADVERSE EFFECTS ON RESIDENTIAL AMENITIES;*
- d) THERE WOULD BE NO UNACCEPTABLE VEHICULAR TRAFFIC FLOWS ALONG MINOR ROADS;*
- e) THE SIZE, SCALE DESIGN AND APPEARANCE OF ANY BUILDINGS ARE IN KEEPING WITH THE LOCALITY;*
- f) SATISFACTORY ACCESS AND PARKING IS PROVIDED.*

Melton Local Development Framework – Core Strategy (Publication) Development Plan Document, February 2012

Energy Supply

11.22 *We accept the need for renewable energy to be sited in appropriate locations and will look favourably on proposals for renewable energy. Households in the Borough consume 5,000 kwh per annum, an average of 0.58kw every hour. We wish to provide as much of this energy for our residents from renewable sources. However, we do not want to see large-scale renewable developments in places where they are inappropriate. Our community expects us to protect our high quality environment and important natural and built heritage.*

11.23 *A Planning for Climate Change study was completed in May 2008. The study considered that Melton offers very good potential for wind energy generation when considered solely from the perspective of wind speeds.*

11.24 *There is potential for wind turbines in Melton although there is a clear relationship between the development of renewable energy schemes and our special landscape character. Any developments must be considered carefully against the landscape character policies of this strategy. The study suggested search areas for the development of wind turbines in the following locations:*

Search Area	Potential Capacity
<i>Nether Broughton</i>	<i>6-8 MW</i>
<i>Garthorpe</i>	<i>8-10 MW</i>
<i>Burton Lazars</i>	<i>6-8 MW</i>
<i>Pickwell</i>	<i>6-8 MW</i>

11.25 *We will work with the renewables industry and our community to pursue opportunities for wind energy in Melton. We expect to use our Land Allocations and Settlement Boundaries Development Plan Document to consider proposals in more detail, particularly the relationship with landscape character.*

11.26 *In assessing the potential ecological impact of wind turbines, developers will be expected to consider the regional patterns of bird movements and how this may affect the integrity of European Sites.*

11.27 *Energy derived from plant material and animal wastes can also be used to generate electricity and/or heat. Biomass energy is dependant on a fuel resource being available. There are two types of biomass; dry biomass (from woodland, forestry, waste from parks and energy crops) and wet biomass or Anaerobic Digestion (animal manure, food waste and energy crops). Melton is able to provide fuel for dry biomass because of a significant potential to provide short rotation coppice and other energy crops.*

- 11.28 *The study suggests that there is potential for a straw burning (dry biomass) power station, of up to 40MW, to be located in our Borough. The location and size of this facility will be considered through the Land Allocations and Settlement Boundaries DPD. It must have access to water for cooling, access to the national grid, be in close proximity to Melton Mowbray on previously developed land and have access to the road network for transportation of fuel.*
- 11.29 *Melton is also home to a significant number of cattle, particularly as part of our dairy herds. Taking into account how many animals are needed to provide a fuel supply for anaerobic digestion the study concluded that there was the potential for dispersed biogas units within the study area. The study estimated a biogas resource within Melton of 0.55MW of electricity; 1.28MW of heat; and Combined Heat and Power consisting of 0.55MW of heat and 0.66MW of power.*
- 11.30 *We expect development proposals for biomass and/or biogas to be accompanied by an air quality assessment that meets the requirements of the Environment Agency. This is particularly important for any proposals which may be located within 10km of Rutland Water (a Special protection Area/Ramsar) to establish whether there are any significant ecological effects.*
- 11.31 *We have also considered the potential for small scale wind, photovoltaics, solar water heating, ground source heat pumps and biomass heating to be integrated within new buildings and developments in Melton. We expect 10% of the energy required by new developments in Melton (of 10 or more dwellings, or other developments in excess of 1,000 sqm floorspace) to be from building integrated renewable or low carbon technologies although we accept that there are instances where this may not be technically feasible.*
- 11.32 *We expect major new development to gain at least 10% of its energy supply on-site from renewable sources and/ or from a decentralised, renewable energy supply. The energy supply for allocated sites will be looked at through the Area Action Plan for the Sustainable Urban Extension and the Land Allocations and Settlement Boundaries Development Plan Document.*

CS20: Energy Supply

We will enable in the region of 45MW of renewable energy to be delivered by 2026 and will work towards the delivery of renewable developments that contribute to the following targets:

<i>Wind (MW)</i>	<i>Anaerobic Digestion¹ (MW)</i>	<i>Straw and annual energy crops (MW)</i>	<i>Building Integrated renewables² (MW electric)</i>	<i>Building Integrated Renewables³ (MW Thermal)</i>
<i>12</i>	<i>0.5 to 1</i>	<i>9</i>	<i>12</i>	<i>14</i>

¹ *Cattle and pig slurry*

² *Solar photovoltaics and micro wind*

³ *Biomass Heating, solar water heating and ground source heat pumps*

We will only allow new renewable developments which respect their surrounding environment (including the integrity of European Sites and their settings), the wider landscape, the historic environment, community, and other land uses.

We will expect development proposals to secure a proportion of their energy requirements from on-site and/or decentralised renewable energy sources where appropriate and viable. Where technically feasible, all new developments of 10 or more dwellings, or other developments in excess of 1,000 sqm floorspace will be required to provide for at least 10% of their energy needs from on-site and/or decentralised sources.

Harborough District Council**Harborough District Local Development Framework - Core Strategy 2006 – 2028, Adopted Nov 2011*****Policy CS9: Addressing Climate Change******Introduction***

- 5.97 *Climate change is increasingly being regarded as the greatest long-term challenge facing the world today. At a national level, the Climate Change Act 2008 commits the UK to an 80 percent cut in greenhouse gas emissions by 2050 (with a reduction in emissions of at least 34 percent by 2020).*
- 5.98 *Harborough District Council is committed to develop a more effective and directed response to climate change. As planning shapes the places where people live and work, development has a key role to play in helping the District become more responsive to the effects of a changing climate.*
- 5.99 *There is now a clear need to move away from a dependency for burning fossil fuels as an energy source. CO2 emissions per capita within the District are higher than both regional and national averages and the percentage of renewable energy generation is extremely low. To redress this imbalance, Spatial Objective 11 of the Core Strategy aims 'to minimise energy demand and maximise the use of renewable energy resources'.*

Policy CS9: Addressing Climate Change

Development which adapts to climate change and helps to reduce the District's carbon emissions will be supported. This will be achieved through measures to ensure that:

- a) New development is directed towards the most sustainable locations and militates against any potential impacts on the environment;***
- b) Derelict, vacant and under-used land is prioritised for re-development and is brought back into more functional uses;***
- c) The use of sustainable materials and construction methods is supported and encouraged;***
- d) All new developments within the District incorporate site layout and design principles which reduce energy demands and increase energy efficiency as follows:***
 - i) All residential developments are encouraged to meet the minimum standards of the Code for Sustainable Homes program (i.e. all new dwellings to meet Code Level 6 requirements by 2016);***
 - ii) Non residential developments will be encouraged to meet a BREEAM (or equivalent) assessment rating of 'very good'. From 2016 this will increase to an assessment rating of 'excellent';***
 - iii) The provision of on-site or decentralised renewable energy systems will be encouraged on non-residential developments of 1,000 m² and above. Such systems should provide a minimum of 10% of a site's total energy requirements.***
- e) The use of renewable and low carbon energy sources are promoted, along with decentralised energy networks. Stand alone renewable energy generation will be supported within the District, where the proposal:***
 - i) Ensures that the most appropriate technology is selected for the site;***

ii) Ensures that the siting of development avoids harm to the significance of a heritage asset, whether designated or not, and its setting ;

iii) Ensures that the impact of the development on local landscape character and historic landscape character is minimised;

iv) Ensures that the siting of development does not create a significant noise intrusion for existing residential dwellings;

v) Includes measures to mitigate against any adverse impacts on the built and natural environment resulting from the construction, operation and decommissioning of any equipment/infrastructure;

vi) Does not create an overbearing cumulative noise or visual impact from renewable energy developments when considered in conjunction with similar developments and permitted proposals within the District and within adjoining Local Authority Areas.

f) Additional innovations which have a positive impact upon climate change adaptation will be supported and encouraged on all developments where feasible. (This could include, but is not limited to: appropriate shading and planting, green roofs, Sustainable Urban Drainage Systems, rain harvesting and storage, and grey water recycling).

Explanation

- 5.100 *Harborough District Council is obliged to help meet national the target of a 34 percent reduction in greenhouse gas emissions by 2020. In addition the results of the Sustainability Appraisal state that; the Council needs to look beyond measures to mitigate against climate change and develop strategies which adapt to a changing climate.*
- 5.101 *The national programme of delivering zero carbon homes by 2016 will be supported within the District. The Code for Sustainable Homes schedule will be implemented without any localised increases to the national requirements. The Leicestershire and Rutland Planning for Climate Change study (May 2008) recommended accelerating the Code for Sustainable Homes programme, by setting a Level 4 minimum standard from 2010. However this recommendation needs to be balanced against the need to meet housing targets and the added financial cost this would place on developers.*
- 5.102 *Planning Policy Statement 22: Renewable Energy states that local planning authorities may include policies that require a percentage of energy to be used in new residential, commercial or industrial developments to come from on-site renewable energy developments. The 'Merton Rule' of requiring 10 percent of on-site or decentralised renewable energy systems on developments of 1,000 m² or above, is now a well established approach. Currently Harborough District has insufficient evidence to expand on this requirement.*
- 5.103 *The Planning for Climate Change study found that wind turbines, biomass plants (including combined heat and power), solar thermal heating, photovoltaic energy and the generation of energy from waste; all have a potential to be utilised and developed within the District. The assessment identified wind energy as a noteworthy source of potential renewable energy generation for the District. This has been accompanied by a number of planning proposals for wind turbines within the District. The siting of wind turbines remains a sensitive issue, as any development needs to balance the requirement for renewable energy generation against the potential impact on the existing built and natural environment. Based on the above, broad areas will not be designated as potential sites of renewable energy generation and all proposals will be assessed against Policy CS9 and the Harborough Landscape Character Assessment. Any further definitive evidence and guidance relating to*

minimum distances between turbines and homes (to deal with issues of safety, shadow flicker, noise and visual intrusion) will also be taken into account.

Wind Turbines - A Developer Guidance Note, July 2009

Environmental Impact Assessment

- 5.1 *If an Environmental Statement is not submitted voluntarily with an application, most turbine applications will require that the Council carry out an Environmental Impact Determination under the Planning (Environmental Impact Assessment) Regulations.*
- 5.2 *In many cases (for example less than 2 turbines or where the hub height does not exceed 15 metres) applications for individual turbines for domestic purposes may not need to be accompanied by an Environmental Statement but you should contact the Council to discuss this.*
- 5.3 *Where it is determined that an Environmental Statement is not required, the Council may nonetheless require the applicant to provide additional information to enable it to process the application – e.g. a noise assessment, ecological study or information on interference with emergency fixed links. Each application will be judged on its own merits and additional information will depend on the individual circumstances.*

For example:

site location,

turbine height,

site designations such as landscape designations or conservation areas.

other localised impact

- 5.4 *Most applications for single large turbines or wind farms that produce energy for the National Grid need to be accompanied by an Environmental Statement. Each application will be judged on its own merits and additional information will depend on the individual circumstances, in accordance with planning policy and other material considerations.*

Topics to be covered should include aspects of the environment most likely to be significantly affected by the development, including population, fauna, flora, soil, water, air, climate factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

An environmental assessment should consider:

- Impact on geology, soil, hydrology and water features including possible contamination during construction.*
- Impact on wetlands and protected habitats.*
- Visual impact including cumulative impact of the proposal plus existing windfarms and other proposed windfarms which have been the subject of a planning application.*
- Impact on the character of the landscape/area, including cumulative impact as noted above including assessment of remoteness/wilderness, for example by tranquillity mapping where appropriate.*
- Climate/emissions, adverse and beneficial effects.*
- Impact on population – noise, public safety, employment/economic benefit.*
- Shadow flicker.*

In all of the above four points developers will be expected to have taken due care to apply government policy and guidance intended to minimize harmful effects on the local population.

- Electromagnetic effects including air navigation, power lines, TV and radio transmission, and other telecommunications equipment. This would include impact on emergency services communications. The developer is advised, prior to submission of a planning application, to have consulted the Wind Energy and Aviation Interests - Interim Guidelines (Pre-Planning Consultation Form available from the DTI/MoD/CAA/British Wind Energy Association.)*
- Access and traffic during construction and after construction, including haul routes to the site.*
- Ecology, flora, fauna (baselines studies essential) including cumulative impact with existing and proposed.*
- Archaeology including cumulative impact with existing and proposed.*
- Listed Buildings.*
- Disturbance during construction.*
- Grid connection.*
- Use of natural resources including sources of materials to be used on site, transported to the site or removed from the site.*

A Non-technical summary of the information should be provided in the Environmental Statement. Sufficient number of copies of the Environmental Statement should be submitted to enable the Council to carry out consultations.

Copies of the ES must also be made available by the Developer at an address within the locality of the proposal. The applicant should state if a charge is to be made for a copy of the ES.

Note: visual impact should address overall height of turbines, alternatives assessed (height and layout), visual impact of access roads, substations and ancillary equipment.

The above must include an assessment of the likely significant effects of the proposal during the construction phase and during operation and possible decommissioning. The inter-relationship between effects and mitigation measures proposed must be addressed e.g. archaeology and landscape.

Corby District Council and East Northamptonshire District Council**North Northamptonshire – Core Spatial Strategy, Adopted June 2008*****Addressing Climate Change***

- 4.14 *The Plan for North Northamptonshire must establish standards and requirements in response to the wider concerns relating to climate change and the reduction of greenhouse gases. There is a national requirement to reduce carbon emissions by 60 per cent from their levels in 2003 by 2050 and for 20% of electricity generation to be obtained from renewable sources by 2020. The policies of this Plan are aimed at increasing the self-sufficiency of the area, thereby reducing the need to travel, and at delivering real improvements in transport choice. Additional measures are however required if climate change is to be seriously addressed. Home energy use is responsible for 27% of the UK carbon dioxide emissions. As the market for renewable energy products grows, then the prices will fall with the economies of scale of production. When this occurs it will also become increasingly cost effective to retro-fit renewable energy measures to existing buildings and the cost burden of delivering higher proportions of renewable energy in respect of new developments will reduce. It may also result in the growth of local manufacturing and service businesses in the renewable energy sector. In recent reviews of renewable energy potential, the Southern Sub Area (which includes North Northamptonshire) of the East Midlands Region has been found to offer the best opportunity for new carbon neutral development. It has also been established that in what will remain a generally rural area, there are some opportunities for wind energy development and significant potential for biomass crops. In line with the latest national guidance and planning advice, it is anticipated that new wind energy development proposals and decentralised biomass fuelled power plants will, in principle, be considered favourably in North Northamptonshire.*
- 4.15 *The Government has signalled its intention to tackle these issues through amendments to building regulations and non-mandatory measures including the introduction of the Code for Sustainable Homes. This Code is intended as a single national standard to guide industry in the design and construction of sustainable homes. There are six levels of the Code, each with minimum energy efficiency/carbon emissions and water efficiency standards. The Code also rewards other environmental considerations, such as sustainable construction materials, the availability of recycling facilities, cycle spaces and home offices.*
- 4.16 *Policy 14 seeks the highest viable standards of environmental performance in all developments and will be supported through a joint Supplementary Planning Document (SPD) on Sustainable Design and the application of the requirements of other plans including the Northamptonshire Waste Local Plan and Development and Implementation Principles SPD, which seek to minimise waste generation through construction and operation, and provide facilities to encourage re-use and recycling, and the draft Regional Spatial Strategy which sets a target of 25% efficiency in domestic water usage.*
- 4.17 *Larger scale developments including the Sustainable Urban Extensions provide the opportunity to secure exemplary standards of sustainable design and renewable or low carbon energy generation. This should be planned from the start but it is recognised that environmental performance is likely to improve progressively. Policy 14 requires large new residential developments to meet the levels of the Code necessary to deliver the three steps to achieving zero carbon emissions by 2016.*
- 4.18 *The BREEAM standard currently remains the most up to date standard for assessing the environmental performance of non-residential buildings. These buildings will have an important part to play in the achievement of more environmentally sustainable developments in North Northamptonshire. Policy 14 requires a BREEAM performance standard of not less than 'very good' for non-residential development forming part of*

large scale mixed-use developments and for other large non-residential developments.

- 4.19 *An energy strategy will be prepared for North Northamptonshire to identify local opportunities to promote renewable, low carbon and decentralised energy systems. In the meantime Policy 14 identifies minimum targets for the provision of energy from these sources that will be sought having regard to the viability of individual developments.*
- 4.20 *Given the level of growth earmarked for North Northamptonshire, it is imperative that a realistic and serious response to meeting climate change obligations is made in respect of planning for new development. A key objective of the Plan for North Northamptonshire is for the area to be a beacon of best practice, becoming a benchmark for green living through using high standards of design, sustainable construction methods and green technology. The requirements set out in Policy 14, particularly for the sustainable urban extensions and larger developments in North Northamptonshire are both demanding and challenging. The targets are considered to be achievable, especially given the economies of scale that will arise from the levels of development planned for in North Northamptonshire, and it is not felt that they will place undue burdens on developers in the area.*
- 4.21 *Whilst it is recognised that the targets set out in this Plan are demanding and challenging at present, they should be viewed as very much the initial local response in North Northamptonshire to climate change and global warming. It is likely that the targets set out in the policy below will become even more demanding through reviews of this Plan. Established national regulatory stipulations alone (for example the current Building Regulations) are insufficient to meet current Government commitments to reducing carbon emissions. Delivering on climate change will require collaboration across the board from land-owners, developers, planners, training bodies, local government, community organisations and householders themselves.*
- 4.22 *In setting the targets aimed at reducing carbon emissions in respect of new development, it is important that such targets do not act to frustrate the possibilities of inward investment to the area. The implementation of the policy will be closely monitored to ensure that it is not acting as a constraint to development or preventing the achievement of the planned levels of growth. This is especially so in relation to certain forms of commercial investment that may be deterred if the need to demonstrate carbon savings is felt to be too onerous, especially in comparison to the requirements stipulated in surrounding areas. In relation to such critical and sensitive forms of commercial development, whilst the standards and targets are challenging, it is anticipated that in most circumstances rather than acting as a brake to investment they will in fact work to attract and promote those businesses willing to commit to delivering the highest environmental standards. However, if it can be clearly and unequivocally demonstrated that the requirements are acting as a brake to investment in individual cases, then there is a possibility that the targets may be reduced in such special circumstances. Given, however, that the targets set in respect of residential development whilst challenging are adjudged to be achievable, it is unlikely that dispensations will be given in respect of this form of development.*

Policy 14: Energy Efficiency and Sustainable Construction

Development should meet the highest viable standards of resource and energy efficiency and reduction in carbon emissions. In particular:

a) Proposals for large developments including the Sustainable Urban Extensions, should demonstrate that:

- i. residential units to be delivered 2008 – 2012 will meet the Code for Sustainable Homes (CSH) level 3 as a minimum; those delivered 2013 – 2015 will meet CSH code level 4 as a minimum; and those**

delivered from 2016 onwards will meet CSH code level 6 as a minimum

ii. non-residential development will be compliant with a BREEAM/Eco-building assessment rating of at least 'very good'

iii. a target of at least 30% of the demand for energy will be met on site (the actual figure to depend upon technical and economic viability), and renewably and/or from a decentralised renewable or low-carbon energy supply

(b) Elsewhere, development proposals should demonstrate that:

i. the development incorporates techniques of sustainable construction and energy efficiency

ii. there is provision for waste reduction/recycling

iii. there is provision for water efficiency and water recycling

iv. residential development involving 10 or more dwellings or 0.5 hectares or more of land, and non-residential development involving 1,000 square metres gross floor area or 1 hectare or more of land should demonstrate that at least 10% of the demand for energy will be met on-site and renewably and/or from a decentralised renewable or low-carbon energy supply

4.23 *The above requirements are to be achieved by combining appropriate measures in undertaking construction and development. These measures will be specified in a North Northamptonshire Supplementary Planning Document on Sustainable Design.*

South Kesteven District Council

Local Development Framework for South Kesteven – Core Strategy, Adopted July 2010

EN3: Renewable Energy Generation

INTRODUCTION

- 4.3.1 *The use of renewable energy, in combination with improvements in energy efficiency of all new development, offers an opportunity for dealing with wider concerns over climate change and the emission of greenhouse gases in South Kesteven.*
- 4.3.2 *The need to conserve and protect the Earth's natural resources underlines the importance of ensuring future development is achieved within known biophysical limits. This now lies at the heart of international commitments on sustainable development and sustainability. These same principles also need to be applied within the context of South Kesteven, where large-scale developments are proposed.*
- 4.3.3 *It will, therefore, be important for the Core Strategy to contain policies which ensure that this wide range of issues is taken into account. Climate-proofing aims to ensure buildings and associated infrastructure are capable of enduring the future impacts of climate change. Examples include: minimising risk of flooding, sustainable drainage (SuDs), minimising risk of subsidence, installing water saving measures and devices (greywater recycling, rainwater harvesting systems, water efficient systems and appliances), fitting and/or making future provision for installing heating*
- 4.3.4 *and power systems that have low or zero carbon dioxide (CO₂) and greenhouse gas (GHG) emissions, constructing buildings that are naturally ventilated and capable of enduring higher diurnal and nocturnal temperatures without the need to install air conditioning systems, using materials that have low/zero CO₂ and GHG emissions and biofuels for transportation.*
- 4.3.5 *Renewable energy is defined as energy that comes from:*
- Solar thermal (solar hot water systems);*
 - Active photovoltaic energy (PV);*
 - Geo-thermal water heating;*
 - Wind turbines;*
 - Energy crops and biomass;*
 - Energy from human sewage and agricultural plant and animal waste but not energy from domestic or industrial waste, except methane from existing landfill sites;*
 - Ground source heat pumps; or*
 - Combined heat and power plants.*
- 4.3.6 *This policy seeks to achieve greater efficiency in use of natural resources, minimise energy demand and increase the use of renewable resources.*

NATIONAL POLICY

- 4.3.7 *PPS1 promotes prudent use of natural resources as a fundamental principle in delivering sustainable development. The supplement to PPS1, published in 2007, sets out how planning should contribute to reduce emissions and stabilise climate change. High quality design and high construction standards are an essential part of the Government's drive to achieve carbon neutrality for all new housing by 2016.*
- 4.3.8 *The Code for Sustainable Homes is a national standard used to assess the sustainability of new dwellings and looks at dwellings in a holistic way. The Code has six levels, with level six being zero carbon: the Government is proposing that all new homes be zero carbon by 2016. The Code includes standards on water, energy,*

materials, surface water run-off, waste, pollution, health and well-being, management and ecology. In the event that the Code for Sustainable Homes is replaced by another method of assessment dwellings should meet at least the equivalent standards set out in the policy. Sustainability for non-residential buildings can also be set using independent assessment methods such as the Buildings Research Establishment's Environmental Assessment Method (BREEAM).

- 4.3.9 *PPS22 advises that RSSs and LDFs should contain policies designed to promote and encourage rather than restrict the development of renewable energy resources.*
- 4.3.10 *The UK has a legally binding commitment under the Kyoto Protocol to reduce greenhouse gases by 12.5% below 1990 levels by 2012. At the same time there is a target to reduce CO2 emissions in the UK by 20% by 2010. The Energy White Paper (2003) set out the Government's goal to pursue policies which meet the targets of providing 10% of electricity supply from renewable sources by 2010 and 20% by 2020.*

REGIONAL POLICY

- 4.3.11 *The Regional Plan policies promote better design and sustainable construction, and set out regional priorities for energy reduction, energy efficiency, low carbon energy generation and are underpinned by an 'energy hierarchy'.*
- 4.3.12 *The Regional Plan provides a steer towards the technologies that are appropriate in each regional Sub-area and sets out indicative renewable energy targets for different technologies. In the context of South Kesteven such generation is likely to come from wind, biomass and landfill gas. The Council will need to make provision for promoting and encouraging energy efficiency and renewable energy to contribute to the regional targets. Through the Partial Review of the Regional Plan, which is currently being undertaken, it is intended to set out Housing Market Area based carbon reduction targets and guidance on the most appropriate mix of technologies.*

LOCAL ISSUES

- 4.3.13 *South Kesteven District Council signed the Nottingham Declaration on climate change in October 2006, which is a public statement of intent to work with the local community and business to respond to the challenges of climate change. Developers will be required to submit a sustainability statement identifying how their proposals meet current best practice standards of renewable energy provision and carbon dioxide reduction. The Council must be satisfied that there are no other environmental impacts arising from the renewable energy technology, which balance out the benefits. This may include the visual impact on listed buildings, Scheduled Ancient Monuments or conservation areas.*
- 4.3.14 *In order to reduce dependence on off-site and non-renewable energy the Council will encourage the incorporation of measures to reduce energy consumption and/or the generation of energy needs with renewable energy within development. The demand for energy resulting from the use of buildings can also be reduced through their design, layout and orientation. The scale of development envisaged by the Grantham urban extensions, and other large site specific allocations, offers opportunities to explore the implementation of on-site renewable energy schemes as part of their development. The feasibility, viability and appropriate targets of such schemes will be explored through the preparation of the Grantham AAP and the Site Specific Allocations and Policies DPD.*
- 4.3.15 *Policy EN4 seeks to achieve greater efficiency in the use of natural resources, to ensure that impacts on natural resources are minimised and potential use of renewable energy/resources is maximised: as a minimum, the most up-to-date national standards, including the Code for Sustainable Homes and the Building Research Establishment's Environmental Assessment Method (BREEAM), will be applied by the Council to new development. This approach complements the development of renewable energy technologies: it aims to ensure that South Kesteven contributes to meeting the renewable energy targets and reducing overall*

demands for energy, through positive and innovative approaches in both urban and rural locations.

- 4.3.16 *National standards in sustainable building practice are set out in the Code for Sustainable Homes [DCLG, 2006]. The Code comprises six levels: the highest of which is zero carbon development. Government guidance indicates a continued increase in the minimum standards of design and construction of new homes, in line with the Code, through changes to Building Regulations, and it is expected that, during the period of this plan, new development will be required to reach level six of the Code. Development will be expected to meet the most up-to-date level in the Code for Sustainable Homes, in addition to complying with Building Regulations.*
- 4.3.17 *The Government is considering producing guidance, similar to the Code for Sustainable Homes, for non-residential development. Non-residential development (which includes industrial, office, retail and schools) will be expected to comply with the latest BREEAM standards or other national standards which are issued during the plan period.*
- 4.3.18 *Further advice and guidance on renewable energy technologies and sustainable construction methods can be obtained from the websites of Communities and Local Government (CLG), the Homes and Communities Agency (HCA) Academy and the Department for Environment Food and Rural Affairs (Defra).*

EN3 RENEWABLE ENERGY GENERATION

The District Council will grant planning permission for proposals to generate energy from renewable sources, subject to the proposals according with the other Core Strategy policies, national guidance and complying with the following criteria:-

The proposal can be connected efficiently to existing national grid infrastructure, unless it can be demonstrated that energy generation would be used on-site to meet the needs of a specific end user.

The proposal should make provision for:

the mitigation of the real emissions/impacts arising from the installation of the renewable energy generation

the removal of the facilities and reinstatement of the site, should the facilities cease to be operational.

South Kesteven Landscape Character Assessment, January 2007

Kesteven Uplands – Landscape Sensitivity

Landscape sensitivity to wind energy proposals is also likely to be medium to high to large scale proposals. Proposals are likely to be difficult to accommodate in this medium-scale landscape with its high proportion of valuable landscape elements.

Trent and Belvoir Vale – Landscape Sensitivity

Landscape sensitivity to wind energy proposals is likely to be medium. Whilst there are few features of intrinsic landscape sensitivity the open visual character of the landscape would ensure extensive visibility. Locations away from sensitive settlements, and close to existing human influences such as the A1 and power lines are likely to offer the more appropriate locations. The open nature of the landscape would mean that the cumulative impact of any proposals should be considered so that the character of the landscape does not become dominated by any wind energy proposals.

Southern Lincolnshire Edge – Landscape Sensitivity

Landscape sensitivity to wind energy proposals would be medium. The open nature of the landscape would result in long range views of any turbines, but there are relatively few sensitive landscape features, and little settlement. The large scale and nature of the landscape and simple topography could accommodate turbines more easily than the smaller scale landscape in other parts of the district.

Harlaxton Denton Bowl – Landscape Sensitivity

Landscape sensitivity to wind energy proposals would be high. Wind turbines are likely to be on a scale that would be difficult to assimilate in this landscape. Views across the landscape are also important to Harlaxton Manor, Belvior Castle and the villages. Wind turbines could detract from these existing landmarks and are therefore likely to be unsuitable.

Grantham Scarps and Valleys – Landscape Sensitivity

Landscape sensitivity to wind energy proposals would be high across the whole of the character area. The small scale of the landscape, the complex landscape elements and the proximity to settlement would make it unlikely that any major turbines could be accommodated.

Fen Margin – Landscape Sensitivity

Landscape sensitivity to wind energy proposals would be medium. Whilst the landscape contains relatively few features of intrinsic landscape interest the scale of the landscape and the relative proximity of settlements are likely to make it difficult to find locations to successfully accommodate wind turbines.

The Fens – Landscape Sensitivity

Landscape sensitivity to wind energy proposals would be low to medium. The scale of the landscape, and the relative lack of features of intrinsic landscape value would mean that some wind turbines may be accommodated.

Wind turbines are relatively visually permeable, and a limited development would allow the overall character of the landscape to be maintained. Acceptability in the landscape would, however, depend on the detailed siting and design, and overall cumulative impact with any other proposals within the district or surrounding areas. Locations close to existing large-scale human influences such as electricity lines, are likely to be most appropriate. Locations near to larger settlements are not likely to be appropriate.

Peterborough City Council**Peterborough Core Strategy Development Plan Document, Adopted February 2011****6.5 Renewable Energy**

- 6.5.1 *Burning fossil fuels for energy emits carbon dioxide and other greenhouse gasses. These emissions are heating the earth's atmosphere, and as a result are contributing to climate change. Fossil fuels are also finite in supply. The Government has committed itself, via the Kyoto Protocol, the UK Low Carbon Transition Plan and legislation such as the Climate Change Act 2008 to reduce the levels of UK carbon dioxide emissions. Key methods of achieving this objective include reducing our demand for energy, improving our resource efficiency through sustainable design and construction principles and increasing the amount of energy, heat and power generated from decentralised, renewable or low-carbon sources, in that order of priority.*
- 6.5.2 *There is also an ever increasing demand for electricity, and the UK is already a net importer of gas due to the decline of the coal industry and closure of coal fired power stations. If the 'status quo' is maintained in the future we will become increasingly dependent on gas imports to meet our electricity needs. This will carry risks, as although gas imports will come from a number of sources, excessive dependency on foreign supply could result in interruptions to supply and price fluctuations, creating a volatile market unsuitable for economic development. The supply could, of course, simply run out quicker than we anticipate, leaving the UK in a difficult position.*
- 6.5.3 *National and regional guidance, in the form of PPS22, the UK Renewable Energy Strategy and the Regional Spatial Strategy (RSS) all encourage the inclusion of policies in the LDF which promote the generation of energy from renewable sources.*
- 6.5.4 *Given the Council's twin aims of delivering successful, sustainable growth alongside transforming Peterborough into the UK's Environment Capital, we need to ensure our energy policies make a strong and achievable response to climate change obligations while striking a balance between sustainability and economic objectives. An increasing number of applications are being received for wind turbines and other renewable energy systems in the district; the Council considers these issues to merit the inclusion of a policy defining our approach to renewable energy provision within the Core Strategy and consideration of further studies into this matter in the future.*

Policy CS11**Renewable Energy**

In addition to seeking reductions in energy demand and carbon emissions, opportunities to deliver on-site or decentralised renewable or low-carbon energy systems will be supported on appropriate sites. A proportion of the energy supply for new developments is expected to be gained from on-site and/or decentralised renewable or low-carbon energy sources, especially for Major Developments, as part of meeting the requirements of the Building Regulations (including such elements of the Code for Sustainable Homes) and, potentially, policy CS10.

Proposals for development involving the provision of renewable and/or low-carbon technologies including micro-generation technologies, together with ancillary buildings and additional infrastructure, will be supported and encouraged, except where the proposal would have unacceptable impacts which are not outweighed by local and wider environmental, economic, social and other considerations of the development.

Permission will only be granted if the developer has satisfactorily addressed the following on an individual case by case basis:

use of the most appropriate technology for the site;

the impact of the development on air traffic operations, radar and air navigational installations;

measures to mitigate any adverse effects on the amenities of occupiers of nearby properties during the construction, operational lifespan and decommissioning of the equipment/infrastructure;

provision for the protection, preservation and/or mitigation for any features of strategic, cultural, agricultural, ecological, historic and/or archaeological importance, including landscape character - where relevant (as described in detail within other policies in the development plan).

The Council will particularly welcome proposals where the capacity for supplies of energy from a decentralised or on-site renewable and/or low carbon technology source exceeds likely consumption, offering scope for surplus energy to be supplied locally via a private wire/heat network or back into the National Grid.

Commercial-scale renewable energy generation developments will be supported at locations where other policies of the development plan can be satisfied. Developments of this type will be subject to an Environmental Impact Assessment (EIA) which will be based on relevant regional and national guidance/best practice and the individual and unique circumstances of the case. When considering such assessments, regard will be given to the wider benefits of providing energy from renewable sources as well as the potential effects at the local scale.

- 6.5.5 *The UK is committed to achieving a 12.5% cut in greenhouse gas emissions from their 1990 levels by 2012 under the requirements of the Kyoto Protocol, at least a 26% cut in CO2 emissions by 2020 and an 80% cut in CO2 emissions by 2050 under the Climate Change Act, while Peterborough City Council also signed up to the Nottingham Declaration on Climate Change in 2004.*
- 6.5.6 *Increasing the proportion of energy generated from renewable sources will help to deliver the Council's aspiration to make Peterborough the UK's 'Environment Capital', and support the Sustainable Community Strategy's aim of adopting and implementing innovative solutions to climate change. Specifically, the policy contributes to the key priorities of the Sustainable Community Strategy 'Delivering Substantial and Truly Sustainable Growth' and 'Creating the UK's Environment Capital'.*
- 6.5.7 *The policy will also honour the findings of the "Your Peterborough" consultation, in which 92% of the 515 respondents agreed that all development should have as little impact on the environment as possible.*
- 6.5.8 *Outcome of Sustainability Appraisal - The SA identifies no significant negative effects or outcomes arising from the policy. There will be significant positive effects in relation to the following sustainability objectives: minimise pollution of natural resources; minimise pollution that causes disturbance; minimise non-renewable energy consumption and 'greenhouse' emissions; and minimise consumption of non-renewable natural resources.*

APPENDIX 3

Landscape Factors and their relationship to sensitivity and capacity for wind turbines

Landscape Character Sensitivity

Landform scale and sense of enclosure – this includes factors such as scale of landform, topographic form and sense of enclosure by landform.

A larger-scale, exposed landscape or a flat, simple landform is more able to accommodate large-scale intrusive features such as wind turbines, as they would be relatively more in keeping with the scale and expansiveness of the landscape or the simple form. A small-scale, contained landscape or with defined changes in level is less able to accommodate large-scale features as they could dominate the landform or compete with the detail and interest of the landscape.

Landcover pattern, scale and sense of enclosure – these factors include the scale and type of landuse or vegetation cover, the pattern and enclosure created by field boundaries and vegetation, and the pattern of field units.

In a large scale, simple, rectilinear or ordered landscape, lines or grids of turbines would be more in keeping with the landcover pattern, scale or type. In a more organic or irregular landscape with smaller scale landcover, turbines may dominate and detract from the landcover pattern and scale.

Landcover change – this relates to the time depth or historic context of the landscape.

Turbines may fit more comfortably in a newer or reclaimed landscape where they can add to the new landscape. In more historic or older landscapes turbines may be seen as intrusive features.

Settlement pattern and density – Factors such as settlement pattern, density of development, scale of built form, vertical elements and transport infrastructure define how settlement relates to the landscape and how existing and proposed elements in the landscape relate to settlements and more dispersed patterns of development.

A single turbine or group of turbines may not dominate a large scale settlement or industrial/infrastructure development. Smaller or rural settlements with few vertical elements may be dominated by turbines that are out of scale.

Visual Sensitivity

Views and Skylines – the elements that contribute to views within and the skyline of a landscape, the detractors and vertical components or absence of them, and their level of sensitivity determine whether new features complement or contrast with the existing situation. This contributes to the visual unity of a landscape.

Turbines can form a focal point or landmark within a view or skyline that has few existing vertical elements or detractors. A skyline that already has many vertical components or detractors can become cluttered and jumbled if further elements are added and turbines can detract from the setting of existing positive skyline elements.

Landmarks and impact of built development – this includes sensitive features and foci as well as built features, which can have an impact on a landscape. Features such as transport corridors, utilities/pylons and individual buildings or groups of buildings can be seen as either landmarks or visual intrusions.

Existing built features can vary in function and form and could either complement or conflict with wind turbines. Wind turbines may conflict with sensitive historic features such as church spires, which can be visible over long distances. Landscapes with a wide variety of different built forms may be more able to accommodate wind turbines but also become cluttered and confused if additional vertical elements are introduced, dependant on the types of features.

Remoteness and tranquillity – These characteristics relate to the extent of human impact on the landscape, physically, visually and in terms of noise and movement. These factors influence the sense of remoteness felt by the observer.

In a landscape that is perceived to be remote and tranquil, due to the lack of human influence, wind turbines may have an adverse impact on these perceptions. In areas with lots of human influences, with low tranquillity and high levels of movements, turbines may be more in character.

Visibility from outside and connections with adjacent landscapes – Turbines can be very tall features and be viewed over long distances, which could potentially impact on views from surrounding landscapes. This factor relates to this intervisibility and the relationships with adjacent landscapes.

Turbines located close to the boundaries of character areas may cause visual impacts on a number of landscape types and areas. Self contained landscapes with limited relationships with surrounding landscapes may be more suitable to accommodate turbines.

APPENDIX 4

Document	Recommended Guidance/Definitions	Other Notes
NPPG6, 2000 – Scottish Executive		<ul style="list-style-type: none"> Key issues relate to: visual impact, landscape, birds & habitats and others (aircraft flight paths, local amenity, noise, construction traffic, TV reception and driver distraction)
PAN45: Renewable Energy Technologies, 2002 - Scottish Executive (now superceded)	<p>Up to 2km – likely to be a prominent feature</p> <p>2-5km – relatively prominent</p> <p>5-15km – only prominent in clear visibility – seen as part of the wider landscape</p> <p>15-30km – only seen in very clear visibility – a minor element in the landscape</p>	<ul style="list-style-type: none"> Key issues relate to: communications systems, aerodromes, television reception, proximity to roads/railways, shadow flicker, noise, power lines, siting in the landscape, visual impact, birds and habitats, cumulative effects and decommissioning Grouped turbines normally appear acceptable as a single, isolated feature in an open, undeveloped landscape Rows of turbines may be more appropriate in an agricultural landscape with formal field boundaries
Visual Assessment of Windfarms: Best Practice, 2002 – University of Newcastle for SNH	<p>Quotes above distances from PAN45</p> <p>Quotes Thomas and Thomas-Sinclair Matrices (see below)</p> <p>Recommendations for ZVI:</p> <p>Turbine up to 50m – ZVI 15km</p> <p>Turbine 51-70m – ZVI 20km</p> <p>Turbine 71-85m – ZVI 25km</p> <p>Turbine 86-100km – ZVI 30km</p>	<ul style="list-style-type: none"> Influences on visibility include: general visibility; proportional visibility; lighting; movement and orientation; distance, colour and contrast; contrast, skylining and backclothing; elevation of windfarm and receptor; colour and design; landscape character and receptors See 'Conceptual Model for Visual Impact Assessment' below Thomas and Thomas-Sinclair Matrices no longer considered to be best practice as discredited at some Public Inquiries
Cumulative Effect of Windfarms, v2, 2005 - SNH		<ul style="list-style-type: none"> Consider combined/ simultaneous, successive/ repetitive and sequential visibility Possible effects include: landscape designations, designed landscapes, landscape character, sense of scale, sense of distance, existing focal points, skylining, sense of remoteness/wildness and other special landscape interests
Visual Representation of Windfarms Good Practice Guidance, 2006 - horner + maclennan and Envision	<p>Guidance on ZVI extents (expanded from recommendations within 'Visual Assessment of Windfarms: Best Practice' (University of Newcastle, 2002)):</p> <p>Turbine up to 50m – ZVI 15km</p> <p>Turbine 51-70m – ZVI 20km</p> <p>Turbine 71-85m – ZVI 25km</p> <p>Turbine 86-100km – ZVI 30km</p> <p>Turbine 101-130km – ZVI 35km</p>	

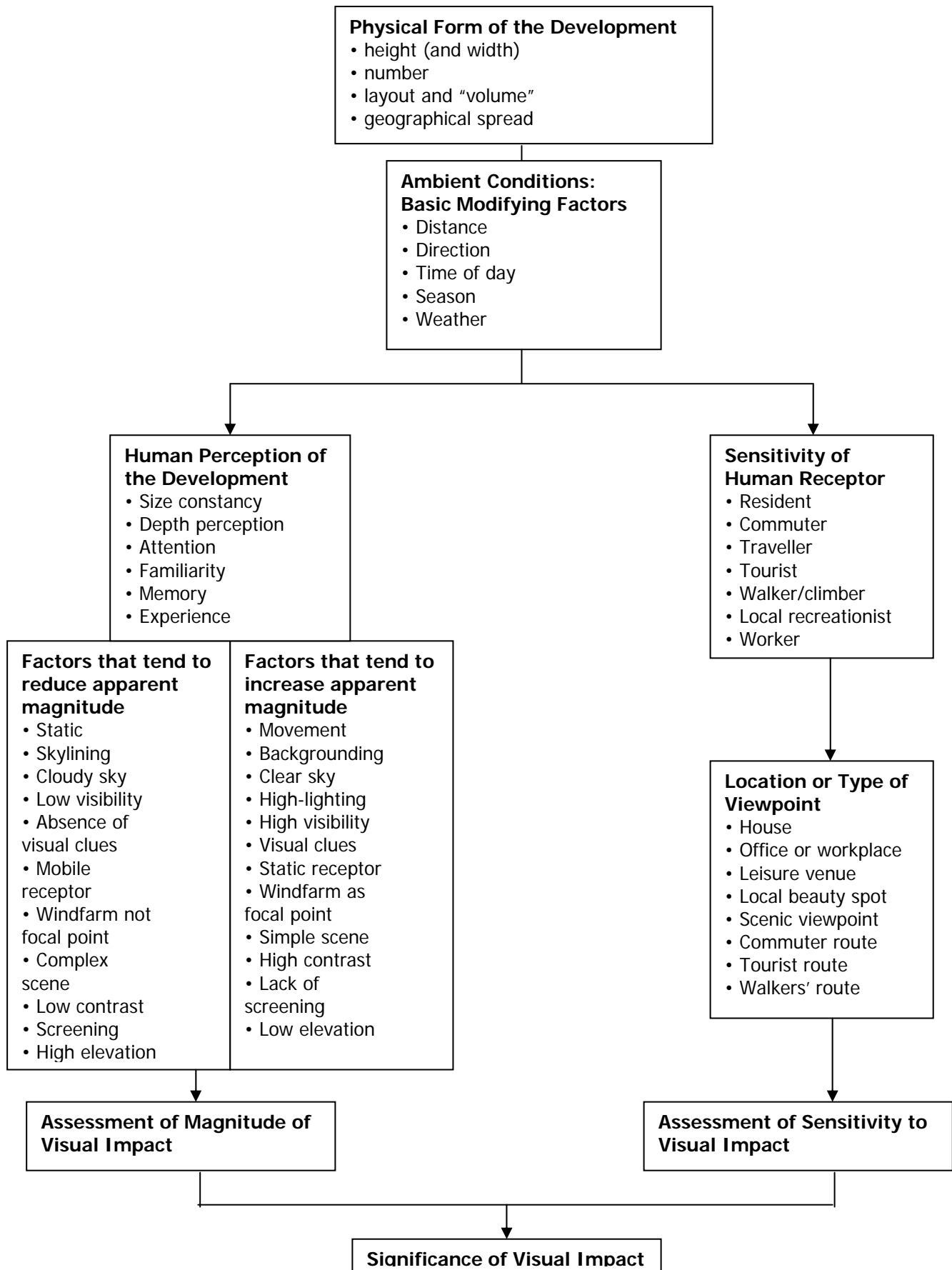
THE THOMAS AND SINCLAIR-THOMAS MATRICES (section A)					
to estimate the potential visual impact of different sizes of wind turbines					
Overall height of turbines (m) >>>		41-45	41-48	53-57	72-74
Descriptors	Band	Thomas Matrix		Sinclair-Thomas Matrix	
		Original	Revised		
		Approximate distance range (km)			
Dominant impact due to large scale, movement, proximity and number	A	0-2	0-2	0-2.5	0-3
Major impact due to proximity: capable of dominating landscape	B	2-3	2-4	2.5-5	3-6
Clearly visible with moderate impact: potentially intrusive	C	3-4	4-6	5-8	6-10
Clearly visible with moderate impact: becoming less distinct	D	4-6	6-9	8-11	10-14
Less distinct: size much reduced but movement still discernible	E	6-10	9-13	11-15	14-18
Low impact, movement noticeable in good light: becoming components in overall landscape	F	10-12	13-16	15-19	18-23
Becoming indistinct with negligible impact on the wider landscape	G	12-18	16-21	19-25	23-30
Noticeable in good light but negligible impact	H	18-20	21-25	25-30	30-35
Negligible or no impact	I	20	25	30	35
Suggested radius for ZVI analysis		15	At least Junction of Band F and Band G; extended to reflect local circumstances or if cumulative impact may be involved		

THE SINCLAIR-THOMAS MATRICES (section B)					
Potential visual impact matrix for wind turbines of 72-74m overall height (field observation) and 90-100m (extrapolated). Distances in km					
Band		72-74m	90-100m	Magnitude	Significance
				<i>(subject to other factors)</i>	
A	Dominant impact due to large scale, movement, proximity and number	0 - 3	0 - 4	High	Potential for independent significant impact
B	Major impact due to proximity: capable of dominating landscape	3 - 6	4 - 8	Medium/High	
C	Clearly visible with moderate impact: potentially intrusive	6 - 10	8 - 13	Medium	Potential for contributory significant impact
D	Clearly visible with moderate impact: becoming less distinct	10 - 14	13 - 18		
E	Less distinct: size much reduced but movement still discernible	14 - 18	18 - 23	Low/Medium	Potential for ancillary nonsignificant impact: only becoming significant if numerous or cumulative with other installations
F	Low impact, movement noticeable in good light: becoming components in overall landscape	18 - 23	23 - 30	Low	
Approximate recommended threshold for ZVI analysis					
G	Becoming indistinct with negligible impact on the wider landscape	23 - 30	30 - 38	Negligible	
H	Noticeable in good light but negligible impact	30 - 35	38 - 45		
I	Negligible or no impact	35+	45 +		

Size Classes, Names and Descriptors for Visual Effect (Magnitude) – From Visual Assessment of Windfarms: Best Practice

Size	Class	Name Descriptors – appearance in central vision field	Modifying Factors
Very Large	Dominant	Commanding, controlling the view	Few
Large	Prominent	Standing out, striking, sharp, unmistakable, easily seen	Few
Medium	Conspicuous	Noticeable, distinct, catching the eye or attention, clearly visible, well defined	Many
Small	Apparent	Visible, evident, obvious	Many
			Limit of Potential Visual Significance ↓
Very Small	Inconspicuous	Lacking sharpness of definition, not obvious, indistinct, not clear, obscure, blurred, indefinite	Many
			Limit of ZVI ↓
Negligible	Faint	Weak, not legible, near limit of acuity of human eye	Few

Conceptual Model for Visual Impact Assessment – From Visual Assessment of Windfarms: Best Practice



APPENDIX 5

Key Characteristics of Landscape Character Sub Areas in Rutland County

Landscape Classification

The Rutland Landscape Character Assessment, 2003, identifies the following Landscape Character Types and Landscape Character Sub Areas.

Landscape Character Type	Landscape Character Sub Area
A. High Rutland	Ai. Leighfield Forest Aii. Ridges and Valleys Aiii. Eyebrook Valley Aiv. Chater Valley
B. Vale of Catmose	B. Vale of Catmose
C. Rutland Water Basin	C. Rutland Water Basin
D. Rutland Plateau	Di. Cottesmore Plateau Dii. Clay Woodlands Diii. Gwash Valley Div. Ketton Plateau
E. Welland Valley	Ei. Middle Valley West (Caldecott - Seaton) Eii. Middle Valley East (Barrowden - Tinwell)

Within the Rutland Landscape Character Assessment a description is provided of the character of each of the Landscape Character Sub Areas. The following provides a summary of the Key Characteristics of each Landscape Character Sub Area, as extracted from the descriptions provided in the Landscape Character Assessment. The Landscape Character Assessment is supported by a Supplementary Planning Document entitled Countryside Design Guidance for Rutland, 2004. The Countryside Design Guidance contains Aims and Objectives for each Landscape Character Sub Area. These are also provided below, highlighted in a grey box.

Key Characteristics of Landscape Character Sub Areas in Rutland County

A. High Rutland

- eastern part of a large hilly plateau
- geology is of ironstone and clays often overlain with boulder clay or, in the valleys, alluvium
- part of the watershed between the Soar – Trent - Humber and the Welland catchments
- dissected by radiating rivers and streams which have formed steep sided valleys separated by ridges
- steeply rolling landform
- highest parts reach over 190 metres AOD
- deeply rural and locally feels relatively remote
- network of narrow gated roads connecting isolated hamlets and farms
- only major roads within the area are the A47 running east to west and the A6003 running north to south
- land use is a mixture of arable on the flatter and more gently sloping ridge areas and grassland mainly on the steeper slopes and in the valley bottoms
- ridge and furrow is fairly well distributed
- field pattern is mainly regular shaped fields bounded by thorn hedges with mainly ash, and in a few places oak, as hedgerow trees
- some hedgerows are substantial and many still perform an important function in this pastoral landscape
- use of inappropriate fencing and the accumulation of stables, barns and other, usually temporary and unsightly, buildings, vehicles, lighting and clutter detracts from the generally unspoilt rural character and is particularly intrusive in views of, to and from the villages
- woodland is a significant feature throughout the area
- parkland is an important component of the landscape in some parts
- settlement form and pattern:
 - Uppingham and the 17 villages
 - a number of farmsteads and occasional other buildings in the landscape
 - villages are located in a belt of denser settlement from Uppingham to North Luffenham and from Rutland Water south to the string of villages on or close to the A47
 - usually located on or close to ridge tops, on high mounds / hills and spilling down the upper slopes, or on a shoulder or crest of land high up the valley slope, but below the ridge top
 - most villages are compact and fit well into the landform
 - most villages are linear - along a single main street with little development in depth, quadrangular - developed around a square of four roads, complex nucleated - clustered around a more complex historic road pattern which may be two rectangles or triangles, or complex extended - where the old village layout is still evident in a historic core but the form of the village has changed more markedly as a result of 19th and 20th century developments
 - most are rural, quiet, historic villages that still exhibit a strong agricultural / estate village character
 - most villages are intimate and tightly enclosed, perhaps looking inwards to the street, a village green, open field or church
 - building materials:
 - in the west coursed rubble ironstone sometimes with dressed / angled limestone quoins and usually with roofs of Collyweston or blue slate or thatch
 - in the east some limestone, some with ironstone, brick and render and roofs of slate with some thatch and tile
 - other villages have a greater variety of materials but are nevertheless very harmonious
 - generally, farm buildings are located in the villages

Key Characteristics of Landscape Character Sub Areas in Rutland County

- radio telecommunication masts are located on several of the higher ridges and are conspicuous over large areas

Leighfield Forest (Sub Area Ai)

- particularly dramatic topography with very steep slopes and generally narrower ridges
- very panoramic, long-distance views out, some extending right across Rutland
- deeply rural, pastoral, wooded landscape with a strong sense of place and history
- valleys are generally narrow, enclosed, steep-sided and intimate in character
- ridges are high, long, narrow and steep with pronounced shoulders
- pasture is almost everywhere that is not woodland
- feeling of antiquity with many noticeable historical features
- farms are notably mainly in the villages
- general lack of buildings out in the open countryside adds to its rural, isolated nature
- perceived as the most densely wooded in Rutland
- popular with walkers and is crossed by the Leighfield/Macmillan Way and the Leicestershire Round
- only settlement is Belton-in-Rutland

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of Leighfield Forest sub-area.

Objectives:

- To maintain the quiet remote character of the area.
- For new development in the countryside to be sympathetic to the small-scale landscape of the area.
- To safeguard exposed ridges and slopes from conspicuous development.
- To safeguard the setting of Belton-in-Rutland.

Ridges and Valleys (Sub Area Aii)

- lacking the sense of rural isolation
- more open, regular, geometric field pattern (exacerbated by some boundary removal) with fewer, low-cut or gappy hedges, fewer hedgerow trees and less enclosure
- ridges and valleys are evident but not as pronounced as to the west
- mixed or arable farming prevails with a variety of crops and intensively managed, improved grasslands
- a less obvious feeling of antiquity and continuity
- busier and noisier with the main roads passing through it
- settlements are more frequent and larger (including Uppingham) and settlement pattern much denser, especially between North and South Luffenham and Uppingham
- roads, railways and disused railways form important linear features
- northern-most part of the Sub Area is more obviously a transition from the characteristic High Leicestershire / High Rutland landscapes to the west and the Vale of Catmose to the east - the ridges and valleys tend to run generally north - south rather than east west and the ridges are more rounded and lower, and the valleys shallower, than in the rest of the Sub Area

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of The Ridges and Valleys sub-area.

Objectives:

- To safeguard the ridges and upper valley slopes from obtrusive development.
- To protect the setting and edges of villages in exposed locations.

Key Characteristics of Landscape Character Sub Areas in Rutland County

For this study, Sub Area Aii has been sub-divided into Aii (north): Ridges and Valleys – Whissendine Plateau and Aii (south): Ridges and Valleys. Aii (north) is the area around Whissendine, where the landform is less pronounced and there are no landscape designations.

Eyebrook Valley (Sub Area Aiii)

- larger scale
- fewer hedgerow trees
- very large, single, Parish woods at Wardley Wood and Stoke Dry Wood
- historic features are still evident
- around Eyebrook Reservoir the slopes are more gradual and the drowned-valley landscape is more open and utilitarian with larger, predominantly arable fields set out in more obvious geometric patterns and lower cut hedges with few hedgerow trees
- The only settlements are Stoke Dry and Wardley

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Eyebrook Valley

Objectives:

- To retain the tranquillity of the sub-area.
- To protect the setting and edges of Stoke Dry and Wardley.

The Chater Valley (Sub Area Aiv)

- distinctly different to the landscape around
- narrow, intimate, sheltered valley with a particularly high level of tree cover in woodlands, roadside and railway-side tree belts, hedgerow trees and copses
- more sinuous lines and irregular patterns in a less colourful landscape
- dominated by the railway and its structures of embankments, cuttings and bridges
- valley is also crossed by the A6121
- the valley feels secluded, away from the noise and movement of the A47
- many trees and historical features
- there are no villages in the Chater Valley Sub Area

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Chater Valley

Objectives:

- To safeguard the open valley sides from development.

Key Characteristics of Landscape Character Sub Areas in Rutland County

B. Vale of Catmose

- stretches down from the north west boundary of the county to the western shores of Rutland Water, south of Oakham
- a broad, generally flat-bottomed valley basin surrounded by higher land
- geology is principally ironstone and limestone overlain in part by glacial tills
- an open valley basin created by the edges, shoulders, ridges and slopes of the surrounding hills and plateaux
- the skylines are frequently wooded
- distinguished by its lower lying land and absence of the dramatic series of ridges and dips
- meadows and fields gently rises in altitude towards the north from the outskirts of Oakham
- typically ranges from about 80m AOD in the lower areas to about 120m AOD on the tops of the rolling hills
- mix of arable land, which is located mainly on the slopes, and pasture, which is located mainly on the valley bottom
- relatively little tree cover
- fields are generally quite regular in shape and relatively larger in size than in the High Rutland hills
- Fields are bounded by low-cut, often gappy, hawthorn hedges with occasional ash trees - often supplemented with post and rail fencing
- evidence of field boundary loss, particularly where arable farming is prevalent
- a number of linear features in the Vale including the disused Oakham – Melton Mowbray canal, the Leicester - Melton - Oakham railway line and the A606 Melton - Oakham Road
- contains a number of electricity transmission lines
- views across the Vale are limited and settlements are not generally visually prominent from within the Vale
- roads across the Vale tend to be straight and narrow
- a series of small streams run generally west-east across the Vale
- a significant network of small field ponds, particularly around Langham
- settlement form and pattern:
 - historic, market town of Oakham is the largest settlement in the County
 - the way that Oakham nestles in the gap between the surrounding hills is important to the setting of the town and gives it a strong relationship with the Vale landscape
 - relatively compact form with well defined boundaries to the west, south and east
 - other settlements comprise small to moderately sized villages
 - villages are generally well distributed and widely spaced across the Vale
 - only Langham has experienced significant 20th C expansion beyond its medieval layout
 - building materials are varied, including ironstone, limestone, red brick and white
 - render with roofs of Collyweston and blue slate, tiles and occasionally thatch

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Vale of Catmose.

Objectives:

- To safeguard the landscape setting of Oakham.
- To safeguard the open Vale landscape from conspicuous development and a scatter of buildings.
- To protect the approaches to the villages of Ashwell, Barleythorpe, Eggleton, Langham and Teigh.

Key Characteristics of Landscape Character Sub Areas in Rutland County

C. Rutland Water Basin

- unique and dominated by Rutland Water
- the middle valley of the River Gwash and its northern tributary, flowing from Oakham, were dammed and flooded to create a major new water storage reservoir
- flooded valley now has the character of a basin, with the flat expanse of water surrounded by generally low, gently sloping hills
- skylines formed by the Rutland Plateau to the north and the High Rutland hills to the south
- geology is principally ironstone overlain by glacial till and alluvium
- the reservoir is curiously unobtrusive from many of the surrounding roads essentially as a result of the undulating topography and high level of tree cover around its shores
- the mass of water is softened by the presence of the Hambleton peninsular, a long finger of steeply rising land which protrudes deep into the reservoir from the western end
- relatively intimate scale despite it being one of the largest man-made water bodies in Great Britain
- flowing landform
- only at the eastern end does the true scale of the reservoir, together with its dam and other infrastructure, become more apparent
- most of the basin has a distinct profile - the land dips sharply down to the water from a shoulder of high ground, effectively obscuring many views of the water below
- along its western shores there is a very gradual down-slope towards the waters edge
- detailed mosaic of pasture and woodland on the shores
- in places arable land sweeps down to the shores in large, geometric fields with low cut hedges
- shorelines vary according to the water level
- water surface varies considerably in accordance with prevailing weather conditions
- a large-scale, open, exposed, busy, varied, colourful, modern landscape that is still maturing and evolving
- settlement form and pattern:
 - all four of the villages that lie within the basin are located around the 90 - 100m AOD contours
 - elevated waterside locations, albeit the water is not always visible from the villages
 - high quality historic cores and all have seen some later development, some of which has not been sympathetic to the traditional village character
 - MoD barracks at Edith Weston on the Rutland Plateau have a particularly uncharacteristic and utilitarian appearance visible from the Basin

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of Rutland Water and protect its setting.

Objectives:

- To safeguard exposed locations particularly the shoreline, slopes and ridges surrounding Rutland Water from conspicuous development.
- To safeguard the setting of Hambleton, Manton, Whitwell and Edith Weston in the Rutland Basin landscape from obtrusive development.

Key Characteristics of Landscape Character Sub Areas in Rutland County

D. Rutland Plateau

- area of generally higher land which occupies the north east part of the County
- dips gently from its highest point (149m AOD) on the ridge above and to the east of the Vale of Catmose, eastward to the lower lying areas around the villages of Ryhall and Essendine, close to the Lincolnshire border, where spot heights close to Ryhall are only 17m AOD
- higher parts are generally characteristic of a relatively high, open plateau
- cut by significant river valleys, notably those of the River Gwash and the North Brook
- heavier clay soils overlying the limestone in the northeast have led to the retention of large woodlands
- the Gwash Valley separates the higher land above Ketton from the main Rutland Plateau to its north
- geology is predominantly Jurassic Limestone with parts overlain by a drift of glacial till and clays
- limestone has been worked for many years as a building stone, in cement manufacture and for general limestone uses - several parts have been disturbed by old workings and are in differing stages of restoration
- limestone geology strongly influences the distinctive landforms (the plateau, scarp and dip slopes, shallow but quite narrow and steep-sided stream valleys), characteristic building materials, typical limestone ecology of semi-natural, species-rich calcareous grasslands and verges and the frequent occurrence of limestone dust on fields, verges and roads
- important in military terms providing a flat and sparsely populated landscape suited to the establishment of airfields and associated barracks
- in the north of the Plateau is the more intrusive Cottesmore Air base which dominates the surrounding arable agricultural landscape
- dissected north to south-east by the A1 trunk road, which follows the line of the original Roman 'Ermine Street' - some localities markedly affected by the road infrastructure itself and the noise and movement of traffic
- generally distinguishable by its predominantly arable farming land use
- broad, geometric network of large, regular fields, enclosed by thorn hedges
- well-treed and wooded landscape, interspersed with pasture, particularly close to the plateau settlements and within the river valleys of the Gwash and North Brook
- tree cover frequently restricts and encloses vistas out from, and into, the plateau
- intensification of arable farming has led to the loss or decline of dry stone walls and hedgerows emphasising the open, windswept, exposed nature of the elevated plateau
- loss of landscape features and the generally level or slightly rolling or dipping landform has resulted in a number of farmsteads becoming more exposed and prominent within the arable landscape, often appearing to be 'perched' on the landscape rather than integrated with it
- important influence of the parkland and sporting management of the Burley, Exton, Tickencote, and Clipsham estates - concentrated on the plateau north of Rutland Water in a belt extending northeast from the imposing Burley Estate, through Exton and on to Clipsham
- a distinctive feature is the single-sided, broad road verges of the network of lanes resulting from Enclosures Act provisions for specified highway widths
- settlement form and pattern:
 - settlements of the Rutland Plateau are concentrated in two main areas - dense and regular pattern of villages across the Cottesmore Plateau and northern part of the Clay Woodlands and the string of settlements along the Gwash Valley
 - the village of Essendine on the eastern fringe of the plateau is less well related to these other settlements along the Gwash, and is dominated by the industrial works which lie between its very small historic core and the railway which services the works

Key Characteristics of Landscape Character Sub Areas in Rutland County

- apart from isolated farms and the military and minerals industry complexes, settlement is generally absent from the Ketton Plateau Sub Area
- form and built character of the plateau settlements varies but they all exhibit some common characteristics, including the limestone building materials
- Cottesmore, Greetham, Empingham and Thistleton display a distinct linear form, with development facing the main road, and with secondary roads joining the main streets at right angles
- Exton has a complex street pattern around its historic core, dominated by the village green
- the main settlements of the Gwash Valley, Great Casterton and Ryhall have been significantly influenced by 19th and 20th century expansion which has affected their historic cores
- Where unaffected by ubiquitous, utilitarian twentieth century housing or industrial developments, the settlements of the Rutland Plateau display a strong degree of coherence and harmony of building materials
- generally a mix of limestone with some ironstone walls, although red brick and white render are also contributors to the mix of colour and texture
- Collyweston slate, or later replacement or substitute materials prevail in the roofscape, although blue slate, red pantile (or substitutes) and thatch all play a significant role in village character

The Cottesmore Plateau (Sub Area Di)

- extends from the northern edge of the Rutland Water Basin, northwards
- the most typical plateau-like characteristics of the four subareas of the Rutland Plateau
- predominantly of a level relief but, with the exception of land around Cottesmore air base, it rarely has the characteristic of being flat - long, shallow, gradual undulations
- arable farming, with large geometric field patterns is the predominant land use interspersed with significant amounts of pasture and many trees, both in larger woods and in the distinctive network of hawthorn hedges
- extensive tree cover is most apparent in the southern section of the Cottesmore Plateau, and is particularly dominant as a landscape feature around the estate and parklands of Burley-on-the-Hill and Exton House
- parkland ambience in the central part of this Sub Area is emphasised by the rich heritage of the estate buildings
- rich tapestry of tree cover and farmland, a planned but mature landscape where longer vistas are interrupted by the patchwork of tree belts and woods rather than by the topography
- elsewhere the landscape is of a simpler, more open nature, where large, open, arable fields and low cut thorn hedges allow a clearer reading of the landform
- condition of characteristic field boundary hedges and hedgerow trees varies markedly, with evidence of hedgerow removal especially in the south and over-mature trees
- evidence of limestone fragments within the surface of the otherwise reddish soil
- evidence of a heritage of drystone wall field boundaries is also evident in this area, although these have been poorly maintained and are not prominent in the landscape, being superseded with hedgerows or more recently post and wire fencing
- isolated farmsteads, often consisting of a complex of large modern agricultural buildings around a small core of traditional farm house and barns, stand prominently on the plateau, served by long linear tracks, devoid of effective landscaping to soften their effect
- locally, the impact of the minerals extraction industry has interrupted the natural relief of the land
- the north-south flowing stream of the North Brook lies within its tightly enclosed valley, a distinct incision marking the edge of the gentle dip of the Cottesmore Plateau
- off the metalled road network that some of the historical heritage of the plateau becomes accessible, for example, around the remains of the medieval village of Horn, and its hidden, dammed valley at Fort Henry where there is a more tranquil and enclosed ambience infrequently experienced elsewhere on the open Plateau

Key Characteristics of Landscape Character Sub Areas in Rutland County

- the northern part of the Cottesmore Plateau is dominated by the airfield and military complex
- the main settlements on the Cottesmore Plateau are Burley, Cottesmore, Empingham, Exton, Greetham, Market Overton, and Thistleton

For this study, Sub Area Di has been sub-divided into Di (north): Cottesmore Plateau and Di (south): Cottesmore Plateau – Exton and Burley. Di (north) is the area around the airfield and military complex. Area Di (south) has a more historic feel and has been extended to include a part of Dii. Clay Woodlands with similar characteristics.

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape character of the Cottesmore Plateau sub-area.

Objectives:

- To safeguard extensive views across the plateau from conspicuous development.
- To safeguard the setting of the villages.
- To ensure that development conserves and enhances the parks, avenues and other designed landscapes and their settings.

Dii. Clay Woodlands

- an extensive area of gently undulating, predominantly arable countryside in the County east of the North Brook
- medium to large scale mixed broadleaved and coniferous woodlands within large farming estates such as Holywell, Clipsham, Empingham and Tickencote
- woodlands are conspicuous features in most views within or into this area
- mature tree-lined roads are also a feature in the north
- woodlands are less extensive around the Gwash Valley, where trees are in small copses and where close trimmed hedges alongside large arable fields give a more open feeling to the landscape
- central area is a transitional area between the settled estate woodlands to the north and west, and the more open, modern unsettled claylands to the east and south
- numerous outlying farms lie within the central area, on or close to quiet roads and tracks some of which are former drove roads
- remnant dry stone walls made of local limestone are characteristic features in some parts of the clay woodlands
- the settlements in the Clay Woodlands Sub Area are Clipsham, Essendine, Pickworth and Stretton

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Clay Woodlands landscape sub-area.

Objectives:

- To safeguard the extensive views across the plateau from within and outside the sub area from conspicuous development
- To protect and enhance the edges and approaches to the villages.
- To enhance where possible the landscape in the vicinity of Essendine.
- To safeguard the tranquil character of Pickworth and its surrounds
- To protect and restore historic or characteristic drystone walls, where possible.

For this study, the northern part of Dii. Clay Woodlands has been moved into Di (south): Cottesmore Plateau – Exton and Burley.

Diii. Gwash Valley

Key Characteristics of Landscape Character Sub Areas in Rutland County

- a small but distinct landscape Sub Area which dissects the Cottesmore and Ketton plateaux from the eastern end of Rutland water
- narrow, sinuous and generally well treed
- in parts, close to the busy A1 and A606 Empingham Road
- the valley is not conspicuous - best appreciated on foot, along the numerous rights of way, including footpaths, bridleways and a section of the Hereward Way national trail
- east of the A1 is more noticeable in views down from Ryhall Road along its northern boundary and the minor road running along its southern edge, from Toll Bar to Belmesthorpe via Little Casterton and Ryhall
- the valley vegetation contrasts sharply with the open arable fields alongside
- this Sub Area of the Rutland Plateau contains the settlements of Belmesthorpe, Great Casterton, Little Casterton, Ryhall, Tickencote and Tolethorpe

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Gwash Valley sub-area.

Objectives

- To safeguard the edges and approaches to the villages.
- To conserve the open valley landscape and views between Ryhall and Belmesthorpe

Div. Ketton Plateau

- occupies the southern-most quadrant of the Rutland Plateau, lying south and south-east of Rutland Water
- distinguished from Cottesmore Plateau more because of its physical separation from the former (by the incision of the Gwash Valley and the basin of Rutland Water), than its distinctly separate character
- notably absent are the large designed landscapes of the Cottesmore Plateau
- gently undulating
- dips gently west to east, with more pronounced dips at its eastern and southern boundaries where it borders the Welland and Chater Valleys
- dominated by two significant intrusions into the otherwise agricultural landscape - the disused North Luffenham military airfield and the cement works and quarry at Ketton
- patchwork of arable and pasture farmland, overlain with less widespread, but nevertheless important woodland cover
- the former airfield has a significant impact on the character of the area by way of its location on the highest part of the plateau, absence of agricultural features and the intrusion of its boundary fencing and military buildings
- absence of views into it from the slightly lower lying ground around, means that the dominance of this base is less than that of the larger Cottesmore base to the north
- impact of the scale and contrast of the mineral and industrial operations at the Castle Cement Works on the immediate locality of Ketton - a lower impact on the wider character of the plateau as a whole - visible from a number of long distance viewpoints and from the Hereward and Macmillan Ways where the quarry becomes more obvious
- relatively few roads over the plateau
- noise and dust from the works emphasise the impact of the industrialised complex
- southern boundary of the Ketton Plateau displays an agricultural landscape with less well managed landscape features
- significant Christmas tree plantations to the east of North Luffenham which contrast with the otherwise predominantly broadleaved, mature tree cover
- No settlements beyond the air base complex lie on the Ketton plateau, although there is a network of isolated farmsteads

Key Characteristics of Landscape Character Sub Areas in Rutland County

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Ketton Plateau sub-area.

Objectives

- To safeguard the open, elevated landscape from conspicuous development.
- To enhance the landscape in the vicinity of the airfield, barracks and mineral and related industrial operations, where possible.

Key Characteristics of Landscape Character Sub Areas in Rutland County

E. Welland Valley

- the Rutland sections of the Welland form much of the middle valley
- untypically for a river valley as it descends through Rutland, the Welland valley is narrowing rather than widening
- forms the County boundary with Northamptonshire so this part of the Welland Valley landscape character type lies partly in Rutland and partly in Northamptonshire
- geology is principally ironstone and clay, overlain by a drift of alluvium
- relatively busy, agricultural, modern landscape with many settlements
- distinctive valley profiles
- river is not prominent but it has a series of exaggerated meanders
- sinuous landform, which contains the river, has caused large loops to be created in the line of the river
- also caused many smaller meanders both in the straighter lengths of river and even within the larger scale, looping meanders themselves
- settlement form and pattern:
 - settlements are more widely spaced in the western part of the Middle Valley
 - villages of Caldecott, Lyddington and Seaton are well back from the river on the foot of the slopes above the historic floodplain
 - Thorpe-by-the-Water is very close to, but still elevated above, the river on a distinct mound which gives it a commanding position in the middle valley
 - there are few farmsteads or other buildings in the valley of the Middle Valley East, outside the villages, Tixover Grange being a noticeable exception with a substantial group of buildings quite close to the river - density of settlement is higher in this part of the Valley
 - in this part all the settlements except Ketton lie very close to or even on the banks of the river
 - Caldecott is a busy, rather noisy village with heavy traffic passing through on the A6003
 - Lyddington, by contrast, is a relatively quiet, rural, enclosed, sheltered village with a distinctive, rather linear shape, village green, many important historic features and a prevalence of stone and slate in buildings of vernacular style
 - Ketton and Barrowden have particularly large and complex historic cores, contrasting with the simple, linear form of Tixover and (apart from the ribbon to the north) of Tinwell

Ei Middle Valley West (Caldecott - Seaton)

- the valley averages about 2km in width with the river running approx. down the centre
- pronounced northward extension created by a small almost insignificant stream running off the High Leicestershire ridge by Gypsy Hollow Lane, south of Uppingham
- flat valley bottom, created by the alluvial plain
- levees and other engineering structures, such as railway embankments and roads, contained the floodplain to a narrower margin along the river edge
- slopes are very regular, of even gradient and slightly concave form running up from the valley floor to distinct shoulders
- predominantly pasture with extensive ridge and furrow, fields grazed by sheep and cattle
- field boundaries almost entirely hawthorn, well trimmed and neatly maintained although containing few hedgerow trees
- no significant woodlands and only occasional groups of trees
- relatively open, large scale, sweeping, pastoral, valley landscape with few buildings on the valley floor
- the river itself is, for the most part, inconspicuous
- there are other more noticeable linear features the most obvious of which is the Welland Viaduct which sweeps the railway across the Valley
- another, now dismantled railway runs along the whole length of this part of the valley
- roads are more noticeable in this generally open landscape and they tend to form very straight lines for long distances interrupted by sharp, angular bends

Key Characteristics of Landscape Character Sub Areas in Rutland County

- settlements are Caldecott, Lyddington and Thorpe-by-the-Water

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape and settlement character of the Middle Valley West sub-area.

Objectives:

- To safeguard the valley floor from the encroachment and proliferation of development.
- To safeguard the setting of historic river features, including the bridges and viaduct.
- To safeguard the exposed valley sides from obtrusive development.
- To protect the sensitive edges of Lyddington, Caldecott and Thorpe by Water.
- To protect the setting of Seaton

Eii. Middle Valley East (Barrowden - Tinwell)

- narrower, with steeper, less regular and locally slightly higher slopes
- significantly more woodland and trees generally
- the skyline is almost continuously wooded on the Northamptonshire side
- more roadside trees, occasional avenues, willows by the river and copses adding to the more enclosed, smaller scale landscape of this part of the valley
- arable land prevails, some field boundaries have been removed and other hedges have not been so well maintained, although some are now being laid, gapped-up and restored
- river is still not prominent even in this smaller scale valley landscape
- views are
- seen from the various bridges
- the Jurassic Way crosses the river at the Turtle Bridge
- settlements are Barrowden, Tixover, Ketton and Tinwell

Countryside Design Guidance for Rutland

Aim:

To safeguard the distinctive landscape character of the Middle Valley East sub-area.

Objectives:

- To protect the form and landscape setting of the riverside villages so they do not become more intrusive in the valley.
- To safeguard the valley floor and sides from the encroachment and proliferation of development.
- To safeguard the setting of the river bridges.

APPENDIX 6

Landscape Factors	Characteristics of Ai: Leighfield Forest
Landscape Character Sensitivity	
Landform scale and sense of enclosure	A series of ridges and valleys running east-west demonstrate distinct changes in level. The landform is a marked characteristic of the area, although there are occasional more open areas e.g. west of Belton. There are basin-type areas in the valleys with localised steep slopes.
Landcover pattern, scale and sense of enclosure	Small to medium sized fields with moderate woodland cover. Taller and bushier hedges with more variety than many surrounding areas. Numerous copses and woodland blocks, as well as vegetation along streams, and a high proportion of hedgerow and field trees.
Landcover change	Generally intact landscape with limited modern intrusions/detractors other than occasional large agricultural barns. HLC indicates most of field pattern dates back to 18 th and 19 th century.
Settlement pattern and density	Belton-in-Rutland is the only village present. This is an historic village with prospects over the countryside from its elevated location. There are a few individual farms or lodges.
Visual Sensitivity	
Views and skyline	A combination of landform and vegetation form the skyline for this area. The skyline is often wooded and well vegetated. Internally the skyline is formed by flatter ridges.
Landmarks and impact of built development	There are limited landmarks within the area and the impact of built development is also limited, with Belton-in-Rutland the only village.
Remoteness and Tranquillity	Relatively high tranquillity, except in the vicinity of the A47 in the south of the area. Relatively remote, with much of area inaccessible except by bridleway.
Visibility from outside and connections with adjacent landscapes	The area is not widely visible from outside, as well as being difficult to see across internally. There are some views into the area from the south and from area Aii to the east.

Landscape Value – High

Area is entirely covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	18	21	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	24	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Aii (north): Ridges and Valleys – Whissendine Plateau
Landscape Character Sensitivity	
Landform scale and sense of enclosure	Gently undulating plateau. Less pronounced topographical variation than Aii (south) Ridges and Valleys. Moderate scale of landform, with some enclosure by undulations. Open aspect to higher ground.
Landcover pattern, scale and sense of enclosure	Limited enclosure by vegetation. Mixed arable and pasture, with a notable proportion of the pasture on ridge and furrow. Regular medium sized fields with clipped hedges as boundaries. Some tree lines to tributary of River Eye.
Landcover change	HLC indicates limited change since time of enclosure (c. 18 th century), except around fringes of area.
Settlement pattern and density	Wissendine is a nucleated settlement. Elsewhere there are scattered farmsteads and some prominent farm buildings.
Visual Sensitivity	
Views and skyline	The soft ridges of the landform and some hedges and hedgerow trees form the skyline. Wissendine village forms skyline in views from west north and south.
Landmarks and impact of built development	Wissendine church, which has a tower with distinctive corner spire finials, is visible from all directions. A windmill forms a feature to the east of the village. Pylons are intrusive to the south west of the area.
Remoteness and Tranquillity	The area is relatively quite apart from in the south west where the A605 passes through. Tranquillity is therefore greater in the north east. Minor roads allow access to Wissendine and there are a number of public rights of way in the quieter areas.
Visibility from outside and connections with adjacent landscapes	The ridges within the area are visible from the Vale of Catmose to the east. There are also partial views into the area from Aii (south) and from higher ground to the north in Leicestershire.

Landscape Value – Low

Only very small area is covered by Area of Particularly Attractive Countryside designation.

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Aii (north): Ridges and Valleys – Whissendine Plateau

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	21	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Aii (north): Ridges and Valleys – Whissendine Plateau

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	18	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Aii (north): Ridges and Valleys – Whissendine Plateau

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Total	17	22	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Landscape Factors	Characteristics of Aii (south): Ridges and Valleys
Landscape Character Sensitivity	
Landform scale and sense of enclosure	Medium scale of landform. Strong sense of enclosure throughout most of area from a series of marked ridges and valleys. Some small plateau areas.
Landcover pattern, scale and sense of enclosure	Variable landcover of small to medium scale. Hedges mainly clipped with a high number of hedgerow trees and small woodland blocks. Localised areas of higher woodland cover e.g. around South Luffenham. The landcover pattern is particularly prominent when viewed on the valley slopes.
Landcover change	There has been limited landcover change in the area, as indicated by the HLC. There has been some field enlargement, particularly on south facing slopes and to the north west of Uppingham. There is a high proportion of ridge and furrow, particularly around villages and on steeper slopes.
Settlement pattern and density	The area contains a number of scattered nucleated villages. These mainly consist of traditional vernacular properties and are small to medium in size. There are also a few isolated farms and some small industrial areas. Settlement is often located on the ridges.
Visual Sensitivity	
Views and skyline	Wider skylines, when viewed from within the area, are generally well vegetated above the numerous ridgelines. Within the character area itself, the landform often forms the skyline.
Landmarks and impact of built development	Church spires form landmarks in this landscape e.g. Preston. Church towers are also often the single albeit modest landmark feature in the surrounding landscape. There are areas of modern industry that intrude on the area e.g. Uppingham and Wing. Two railway lines cut through the area and pylons and high voltage cables run through the area north-south.
Remoteness and Tranquillity	Away from the A47 and A6003 that run through the area, the Ridges and Valleys are relatively tranquil and remote. Minor lanes and public rights of way are the only access to much of the area.
Visibility from outside and connections with adjacent landscapes	The perimeter ridges form the horizon for the surrounding lower lying character areas, e.g. Rutland Basin, the Welland Valley and the Vale of Catmose. There is a strong interrelationship between these areas.

Landscape Value – High

Area is almost entirely covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Aii (south) Ridges and Valleys

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Aii (south) Ridges and Valleys

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	19	22	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	24	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Aiii: Eyebrook Valley
Landscape Character Sensitivity	
Landform scale and sense of enclosure	A medium scale landform, forming one side of the Eye Brook valley. The landform provides good enclosure and is of a smaller scale where secondary valleys occur.
Landcover pattern, scale and sense of enclosure	Woodland provides reasonable enclosure for much of the valley, although there are isolated locations where clipped hedges are the only field boundaries. The pattern of the landcover is not geometric as it closely follows the landform. This means that many of the fields are irregular, although those closest to the reservoir are more regular, with new hedges following the perimeter roads around the reservoir.
Landcover change	Landcover change is variable within the area. The reservoir is a relatively modern introduction, with some semi-mature landcover elements around it. The HLC indicates that elsewhere in the area there has been minimal change since the 19 th century and areas of ridge and furrow are present.
Settlement pattern and density	The area contains a number of small villages and hamlets, with the predominant building material being ironstone. The settlement is usually set on ridges, forming focal features.
Visual Sensitivity	
Views and skyline	The skyline of this area is formed by a combination of landform and vegetation. These truncate views through and out of the area, although there are some views along the valley and reservoir. There are very few visual detractors in the area.
Landmarks and impact of built development	Small churches within the cluster of properties in a village form localised landmark features. There are also a small number of isolated houses, such as the Manor at Stoke Dry. The reservoir itself also forms a landmark that draws the eye. There are limited roads within the area. The A47 cuts across the top of the area but other roads are more minor and follow the undulating landform.
Remoteness and Tranquillity	The area is fairly tranquil and remote, with the A47 the only main road. Elsewhere there is limited access and minor roads provide access to the valley bottom and reservoir.
Visibility from outside and connections with adjacent landscapes	The area is visible from the A6003 to the east and from the remainder of the Eye Brook valley in Leicestershire to the west. The area is generally inward facing and only visible from adjacent to its edges, with limited outward views.

Landscape Value – High

Area is entirely covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Aiii: Eyebrook Valley

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	17	18	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	24	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Aiv: Chater Valley
Landscape Character Sensitivity	
Landform scale and sense of enclosure	The small to medium scale landform of this area varies between steep slopes down to the river in some locations to wider valleys in other locations. The slopes running down to the river create some enclosure, with further ridges beyond the area adding to the enclosure.
Landcover pattern, scale and sense of enclosure	The landcover pattern and scale varies throughout the area. There are some larger arable fields, particularly north of the river, and smaller pastoral fields and woodland blocks, particularly south of the river. There is also patchy vegetation along the River Chater and some distinctive avenues of oak trees north of the river.
Landcover change	The HLC indicates variability in the intactness of the landscape in this area. There are some locations where hedgerow removal has created larger fields, generally on the northern slopes of the valley, although there has been some recent replacement of hedgerows. The landscape around most of the villages and south of the river is generally more intact.
Settlement pattern and density	Most settlement within this area consists of small nucleated settlements located on the upper slopes of the valley. The exception to this is Pilton, which is within the valley. The settlements are generally traditional stone villages.
Visual Sensitivity	
Views and skyline	Adjacent ridges form the skyline to this area. There are views along the valley.
Landmarks and impact of built development	The church spire at North Luffenham (outside the area) forms a landmark for the area. There is also a windmill south east of North Luffenham that forms a localised landmark.
Remoteness and Tranquillity	The area is fairly tranquil apart from in the vicinity of the A6121 and the railway line that run along the valley.
Visibility from outside and connections with adjacent landscapes	There are views into the valley from its fringes but not from much further beyond. There are not extensive views into the area from its villages.

Landscape Value – High

The majority of the Area is covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	17	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Aiv: Chater Valley

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	22	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	24	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of B: Vale of Catmose
Landscape Character Sensitivity	
Landform scale and sense of enclosure	The landform within this area is relatively open and large scale. It is a gently undulating vale with some localised higher ground. It also includes the slopes up to the adjacent higher plateau and ridges.
Landcover pattern, scale and sense of enclosure	The area generally contains medium to large fields but is more open around Oakham. The landcover is a mix of arable and pasture with limited woodland cover, although there are more trees to the north. Fields are relatively regular, with most hedgerows clipped.
Landcover change	The area contains pockets of more intact landscape, but the HLC indicates large areas of more recent field patterns and housing development. These areas are more fragmented and have suffered from a loss of field boundaries.
Settlement pattern and density	Settlement within the area consists of the large market town of Oakham and a number of smaller villages. All of these settlements have historic cores with more modern development on the peripheries. Beyond the villages settlement is sparse. The villages generally use ironstone as their main construction material. The location of settlement is a mix of next to the river and on higher ground.
Visual Sensitivity	
Views and skyline	There are fairly open views within the area, including from internal higher ground. The skyline is generally formed by surrounding higher ground and vegetation.
Landmarks and impact of built development	Built development has had a high impact on the area, particularly the variety of new and old transport corridors, the former Ashwell Prison and new development on the northern edge of Oakham. Church towers or spires form localised landmarks, with the spire of the church in Oakham a more significant landmark.
Remoteness and Tranquillity	The area is not generally remote but it does have areas of relative tranquillity. The busy roads (A606 and A6003 in particular) and railways that pass through it, as well as larger areas of settlement, have a particular impact in the south of the area. There is a limited right of way network within the area, with the northern part of the area feeling more rural and empty. The whole area would be busier with tourists during the summer months.
Visibility from outside and connections with adjacent landscapes	There are views into the area from surrounding plateau and ridges, particularly the plateau to the east and the ridges and valleys to the south and west.

Landscape Value – Moderate

Area is partially covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	20	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – B: Vale of Catmose

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Total	16	19	23	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – B: Vale of Catmose

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	18	22	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Landscape Factors	Characteristics of C: Rutland Water Basin
Landscape Character Sensitivity	
Landform scale and sense of enclosure	A large scale basin landform. The landform creates some enclosure, particularly from the north and south. The landform within the area generally forms a fringe to the flat expanse of water in the reservoir, creating a marked contrast with the horizontal plane of the water body. The Hambleton peninsula is also a marked feature rising from the reservoir and this also creates some enclosure.
Landcover pattern, scale and sense of enclosure	Landcover is of a small to medium scale and is predominantly pasture. Pockets of larger scale arable land relate to the land uses pre-reservoir. There are also a large number of recreational land uses within the area including boating, car parks and cycle facilities. A combination of areas of new and original woodland creates some vegetation enclosure.
Landcover change	The reservoir has created a modern 20 th century landscape for the majority of this area, although this has been softened by new planting. The HLC indicates much of the area surrounding the reservoir dates from 18 th and 19 th century enclosure, although this landcover pattern is now more fragmented.
Settlement pattern and density	The area contains a number of small traditional villages. These villages are located on higher ground overlooking the reservoir. There are also a number of visitor centres and associated facilities located around the perimeter of the reservoir.
Visual Sensitivity	
Views and skyline	From the waters edge the skyline is formed by surrounding landform and vegetation. It is an important and prominent feature of the area, with little of the landscape beyond the area visible.
Landmarks and impact of built development	A number of parish churches are visible across the water, with their intervisibility an important feature. Other landmarks in the area include Rutland Water itself, views to Burley House outside the area and Normanton church museum on the waters edge. The reservoir has had a major impact on the area, with the A606 running along the northern boundary of the area and other minor roads that have been engineered in association with the reservoir also having an impact.
Remoteness and Tranquillity	Although CPRE tranquillity mapping indicates the area to be relatively tranquil, the roads around the reservoir are generally busy and there are lots of activities that take place on and around the reservoir. There is seasonal variation but the area is a busy tourist attraction.
Visibility from outside and connections with adjacent landscapes	There are views into the area from surrounding higher ground, particularly to the north and south. The dam blocks views into the area from along the Gwash valley. The area has a connection with surrounding areas higher up the slopes of the basin and from the higher ground at the edges of the area there are more extensive views out of the area.

Landscape Value – High

Area is entirely covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	21	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – C: Rutland Water Basin

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Total	19	21	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – C: Rutland Water Basin

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	22	23	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Di (north): Cottesmore Plateau
Landscape Character Sensitivity	
Landform scale and sense of enclosure	This area is a large scale, relatively open landscape that consists of a gently undulating plateau. The landform does not create any enclosure for the area.
Landcover pattern, scale and sense of enclosure	A large scale arable landscape with some small woodland blocks and a regular field pattern. Hedges are generally low, clipped and gappy, with hedgerow trees often mature or over mature. The former Cottesmore Airfield is a major landuse and there are a number of small stone quarries in the area as well.
Landcover change	Much of the landuse pattern within the area dates from the 20 th century, as indicated by the HLC. This includes the loss of hedgerows throughout the central part of the area. There is also modern development on the edges of many of the villages.
Settlement pattern and density	The area includes five nucleated limestone villages around the fringe of the plateau, each consisting of an historic core with modern development around it. In contrast, the airfield development consists of large areas of modern housing and numerous larger hanger type buildings.
Visual Sensitivity	
Views and skyline	The skyline to this area is generally formed by landform, although built forms at the airfield or vegetation do occasionally form the skyline. There are fairly open views across the area, although these views are more sensitive towards the edges of the plateau.
Landmarks and impact of built development	Church spires create landmark features in the area, particularly Greetham and to a lesser extent Cottesmore. Large bulky buildings on the airfield also act as landmarks. Otherwise it is a relatively empty landscape.
Remoteness and Tranquillity	Now that flying has ceased from the airfield the area is relatively tranquil. The A1 on the eastern boundary of the area does create a localised intrusion. Due to the presence of the airfield, access is limited to the centre of the area and most roads are located at the perimeters of the area.
Visibility from outside and connections with adjacent landscapes	Views in to the centre of the area are relatively limited from surrounding areas, due to the elevated plateau landform. Views are limited to the edges of the area are possible from the surrounding valley, vale and plateau landscapes.

Landscape Value – Low

Only a small part of area is covered by Area of Local Landscape Value designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Low (1)	Moderate (2)	High (3)
Landcover pattern, scale and sense of enclosure	Low (1)	Low (1)	Low (1)	Moderate (2)	High (3)
Landcover change	Low (1)	Low (1)	Low (1)	Moderate (2)	High (3)
Settlement pattern and density	Low (1)	Low (1)	Low (1)	Moderate (2)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	Moderate (2)	Moderate (2)	High (3)
Landmarks and impact of built development	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Remoteness and Tranquillity	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Visibility from outside and connections with adjacent landscapes	Low (1)	Low (1)	Low (1)	Moderate (2)	High (3)
Total	9	9	11	16	24
Overall Sensitivity	Low	Low	Low	Moderate	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Di (north): Cottesmore Plateau

Appendix 6

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover pattern, scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover change	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Settlement pattern and density	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Total	10	11	18	21	24
Overall Sensitivity	Low	Low	Moderate	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Landcover change	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Total	10	14	19	24	24
Overall Sensitivity	Low	Moderate	Moderate	High	High

Landscape Factors	Characteristics of Di (south): Cottesmore Plateau – Exton and Burley
Landscape Character Sensitivity	
Landform scale and sense of enclosure	A medium scale, gently undulating plateau landscape containing a number of secondary valleys and slopes. The landform provides limited enclosure.
Landcover pattern, scale and sense of enclosure	A prominent pattern of estates, with parkland and plantation woodland, provides locally strong enclosure at a medium to small scale. Some areas to the periphery are relatively more open and less contained.
Landcover change	As indicated by the HLC, the area is relatively intact, containing estate landscapes and historic villages. There are some areas of historic field boundary loss, but areas of new hedge and woodland planting have offset this change.
Settlement pattern and density	Settlement within the area is largely limited to the estate villages of Exton and Burnley, which are adjacent to the main historic houses. Burley House is a large Palladian house with extensive wings, whilst Exton has a strong vernacular character with a combination of limestone and ironstone. Clipsham and Stretton villages are located east of the A1. The remaining settlement in the area consists of isolated farms and lodges.
Visual Sensitivity	
Views and skyline	Views are formed within the area by major woodlands to most of the skylines. There is a more undulating landscape east of the A1 and some more open aspects look out to the south.
Landmarks and impact of built development	The large country houses form landmarks within this area. Churches have a more localised influence in the landscape. There are few detractors in the area, although Stocken Prison is very prominent at close range.
Remoteness and Tranquillity	Major roads such as the A1 and the A606 create localised disturbances within the area, and seasonal attractions such as Barnsdale Gardens also interrupt tranquillity. There is limited public access to parts of the area, particularly the private estates.
Visibility from outside and connections with adjacent landscapes	There are views into the area from Cottesmore Plateau to the north and of the edges of the area from the surrounding vale, valley and plateau landscapes.

Landscape Value – Moderate

Area is partially covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Di (south): Cottesmore Plateau – Exton and Burley

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	16	23	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Di (south): Cottesmore Plateau – Exton and Burley

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	17	22	24	24	24
Overall Sensitivity	Moderate	High	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Di (south): Cottesmore Plateau – Exton and Burley

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Total	20	23	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Dii: Clay Woodlands
Landscape Character Sensitivity	
Landform scale and sense of enclosure	This gently undulating plateau creates limited enclosure, except in locations where seasonally dry incised tributary valleys are located.
Landcover pattern, scale and sense of enclosure	Landcover is generally large scale arable fields with isolated medium scale woodland blocks.
Landcover change	The HLC indicates that the core of the area dates back to the 18 th -19 th century, whilst the eastern part of the area is more modern. Throughout the area there has been a high proportion of hedgerow loss to create field amalgamation and stone wall field boundaries are in poor repair. The former airfield and the current golf course adjacent to it, in the north west corner of the area, are also of more modern origin.
Settlement pattern and density	There is limited settlement within this area. Essendine is the main settlement in the east of the area and is relatively modern and faces away from the area. Pickworth on the northern boundary of the area is an older village and faces south into an open section of the area. Elsewhere, settlement is limited to isolated farms including some large functional farmsteads. The historic settlement of Stamford is located to the south of the area, although the suburban development closest to the Clay Woodlands is relatively modern.
Visual Sensitivity	
Views and skyline	Skylines within the area are generally formed by vegetation and the landform of the plateau. Views within the area are often extensive.
Landmarks and impact of built development	There are few landmarks within the area at present. There are number of existing detractors, including the A1 on the western boundary, a railway line and pylons in the east and a number of industrial and agricultural buildings within the area.
Remoteness and Tranquillity	Whilst the core of the area has a remote and tranquil feel, the A1 and the railway intrude on this tranquillity around the edges of the area.
Visibility from outside and connections with adjacent landscapes	There are views into the area from Cottesmore Plateau – Exton and Burley to the west and to the edges of the area from the surrounding valley and plateau landscapes.

Landscape Value – Low

Almost none of area is covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover pattern, scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Low (1)	Low (1)	Moderate (2)	Moderate (2)	Moderate (2)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Total	11	12	16	21	23
Overall Sensitivity	Low	Low	Moderate	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Dii: Clay Woodlands

Appendix 6

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Low (1)	Moderate (2)	Moderate (2)	Moderate (2)	Moderate (2)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	12	14	19	22	23
Overall Sensitivity	Low	Moderate	Moderate	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Dii: Clay Woodlands

Appendix 6

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	Moderate (2)	Moderate (2)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	14	16	19	23	24
Overall Sensitivity	Moderate	Moderate	Moderate	High	High

Landscape Factors	Characteristics of Diii: Gwash Valley
Landscape Character Sensitivity	
Landform scale and sense of enclosure	The small to medium scale landform of this area is created by the meandering landform of the Gwash valley. The narrow valley creates some enclosure, although the middle section of the valley, west of the A1, is less pronounced.
Landcover pattern, scale and sense of enclosure	The landcover pattern is of a small to medium scale, with a high proportion of pasture and some parkland to the east. The river has a riparian character around Tolethorpe and Ryhall, with flood meadows/pasture present. The area includes the earth dam of Rutland Water.
Landcover change	The area is relatively intact, as shown by the HLC. Localised changes have taken places around Rutland Water, the A1 and east of Empingham. This includes reversion to arable farming east of Empingham.
Settlement pattern and density	The area contains a series of nucleated limestone villages, including part of Empingham, Tickencote, Great Casterton and Ryhall. The remainder of the area is generally unsettled with occasional isolated halls or mills.
Visual Sensitivity	
Views and skyline	Higher plateaux form the skyline to the north and south of the area. There are short views along the river, which are both framed and curtailed by the meandering of the valley.
Landmarks and impact of built development	There are few detracting features within the area. Empingham church forms a landmark on the edge of the area, but there are few other landmark features.
Remoteness and Tranquillity	The A1 and A606 passing through the area disturb its tranquillity, as do some of the larger villages. There are limited public rights of way in the area.
Visibility from outside and connections with adjacent landscapes	There are few extensive views into the area, other than from the plateaux at the edges of the area.

Landscape Value – Moderate

Area is partially covered by Area of Particularly Attractive Countryside or Area of Local Landscape Value designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	16	17	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
 Landscape Character Type – Diii: Gwash Valley

Appendix 6

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Total	23	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	High (3)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	24	24	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Div: Ketton Plateau
Landscape Character Sensitivity	
Landform scale and sense of enclosure	The medium to large scale gently undulating plateau has no enclosure by landform, despite modification of the landform by human interaction e.g. quarries.
Landcover pattern, scale and sense of enclosure	The area has medium to large scale landcover, which is predominantly arable with some woodland blocks. There are also existing and former quarries in the area, as well as the former North Luffenham airfield (now St George's Barracks). Hedgerows are generally low and clipped, although there are taller hedgerows in the vicinity of Ketton quarry.
Landcover change	There has been a large amount of landcover change within this area, particularly at its core as shown by the HLC. This includes the introduction of the airfield as well as the ongoing quarrying work, particularly north of Ketton. There are also areas of restored quarry and new planting and bunding associated with the former airfield and quarries.
Settlement pattern and density	There is limited settlement within this area. There are a number of villages to the periphery of, but outside, the area and a small number of isolated properties on the plateau. The main settlement is St George's Barracks and the former airbase buildings, all of which are modern and extensive.
Visual Sensitivity	
Views and skyline	There are wide views across the area, which are more sensitive close to the edges of the area where it joins the surrounding valleys. The skyline is formed locally by woodland blocks and the plateau landform.
Landmarks and impact of built development	Landmarks within the area are generally also detractors. They include Ketton cement works, three tall radio masts in the vicinity of the former airfield and the quarry, and buildings at St George's Barracks.
Remoteness and Tranquillity	There is limited access to and within the area, particularly by rights of way. Lots of activities occur within the area, including quarrying and traffic movement on the A1, which reduce the tranquillity of the area.
Visibility from outside and connections with adjacent landscapes	The centre of the area has limited visibility from surrounding areas. However, the edges are more visible and form the skyline for surrounding areas. There are also views out of the area, over surrounding areas, from the edges of the plateau.

Landscape Value – Moderate

Area is partially covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	Moderate (2)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	Moderate (2)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Total	13	14	17	22	24
Overall Sensitivity	Low	Moderate	Moderate	High	High

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Low (1)	Low (1)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	13	15	19	24	24
Overall Sensitivity	Low	Moderate	Moderate	High	High

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Landcover change	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Settlement pattern and density	Moderate (2)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Low (1)	Moderate (2)	Moderate (2)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Total	15	16	19	24	24
Overall Sensitivity	Moderate	Moderate	Moderate	High	High

Landscape Factors	Characteristics of Ei: Middle Valley West (Caldecott-Seaton)
Landscape Character Sensitivity	
Landform scale and sense of enclosure	A large scale wide valley, forming part of the Welland valley and becoming narrower to the east. The area is mainly low lying but has some steeper slopes e.g. around Seaton. Although the area is gently undulating, there is limited enclosure within the area. Ridges at Gretton and in area Aii do provide some level of enclosure beyond the area.
Landcover pattern, scale and sense of enclosure	The area contains a combination of large scale rectilinear arable fields and smaller scale pastoral fields. There is limited woodland cover, hedgerows are low and clipped and hedgerow trees are isolated and scattered. Therefore, enclosure by vegetation is limited.
Landcover change	Landcover change within the area has been relatively little, as shown by the HLC. There are some areas of field enlargement, particularly between Lyddington and Seaton. Areas of ridge and furrow are present and most of the villages are relatively intact and historic.
Settlement pattern and density	The area contains three main nucleated villages, with ironstone the predominant vernacular building material. There are a small number of isolated farms within the area, demarcated by shelter belts of poplars.
Visual Sensitivity	
Views and skyline	The skyline of this area is formed by surrounding ridges in adjacent areas, although higher parts of the valley form the skyline locally within the area. There are longer views along the valley.
Landmarks and impact of built development	The spires of village churches form the main landmarks and focal points within the area. The Welland Viaduct forms a landmark on the boundary of the area. However, there are limited detractors within the area, with a run of pylons through the centre of the area the greatest detractor.
Remoteness and Tranquillity	Roads and settlement within the area do impact on its tranquillity, although most roads are relatively minor. It is not a particularly remote area and does contain a number of rights of way and promoted routes.
Visibility from outside and connections with adjacent landscapes	The area is highly visible from surrounding ridges, both within Rutland and outside the county to the south. It is possible to see a considerable distance from within the area.

Landscape Value – High

Area is entirely covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landcover change	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Total	18	18	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Ei: Middle Valley West (Caldecott-Seaton)

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	20	21	24	24	24
Overall Sensitivity	High	High	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Ei: Middle Valley West (Caldecott-Seaton)

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	22	23	24	24	24
Overall Sensitivity	High	High	High	High	High

Landscape Factors	Characteristics of Eii: Middle Valley East (Barrowden-Tinwell)
Landscape Character Sensitivity	
Landform scale and sense of enclosure	This area is a medium scale valley landscape. The valley creates a level of enclosure, with ridges to the north and south strengthening the enclosure. The river and valley contain meanders, which create enclosure along the valley, although the valley is more open to the east.
Landcover pattern, scale and sense of enclosure	The landcover is generally medium to large scale, although areas around Tixover and Aldgate are smaller scale with more woodland. The main landcover is arable farmland, which is divided by clipped hedges. This creates an open landscape.
Landcover change	The HLC demonstrates that the western part of the area is relatively intact, retaining enclosure hedgerows and areas of ridge and furrow. To the centre of the area and around Ketton there has been more change in the landscape, with enlarged fields present.
Settlement pattern and density	The area contains a number of small to medium sized villages with historic limestone cores. Ketton is a larger village and has a greater amount of modern expansion that is less in keeping with the vernacular.
Visual Sensitivity	
Views and skyline	The skyline of this area is generally formed by surrounding ridges in adjacent areas, although higher parts of the valley form the skyline locally within the area. There are also woodlands and tree groups on the skyline in some areas, although usually outside the area. There are views along the valley, although its meandering form sometimes curtails these views.
Landmarks and impact of built development	Church spires create localised landmarks within the area. The Welland Viaduct forms a landmark on the boundary of the area. There are a number of detractors beyond the area that have an influence on it, including Ketton cement works.
Remoteness and Tranquillity	The area appears less remote than area Ei, although some areas are entirely inaccessible. The area is less tranquil to the east, particularly in the vicinity of the A1 and Ketton. The A47 also passes through the area.
Visibility from outside and connections with adjacent landscapes	The area is highly visible from surrounding ridges, both within Rutland and outside the county. It is possible to see a long distance, from within the area. There are also views into the area from area Ei to the west.

Landscape Value – High

Area is almost entirely covered by Area of Particularly Attractive Countryside designation.

Small turbines (up to 50m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landcover change	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Settlement pattern and density	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Visual Sensitivity					
Views and skyline	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Landmarks and impact of built development	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Remoteness and Tranquillity	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Visibility from outside and connections with adjacent landscapes	Moderate (2)	Moderate (2)	High (1)	High (1)	High (1)
Total	16	16	24	24	24
Overall Sensitivity	Moderate	Moderate	High	High	High

Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Eii: Middle Valley East (Barrowden-Tinwell)

Medium turbines (50-99m)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	Moderate (2)	Moderate (2)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	22	23	24	24	24
Overall Sensitivity	High	High	High	High	High

**Sensitivity Analysis of Landscape Character Sub Areas in Rutland County
Landscape Character Type – Eii: Middle Valley East (Barrowden-Tinwell)**

Large turbines (100m +)

Landscape Factors	Single Turbine	Small Scale Group (2-5)	Small to Medium Scale Group (6-11)	Medium Scale Group (12-16)	Large Scale Group (17+)
Landscape Character Sensitivity					
Landform scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover pattern, scale and sense of enclosure	High (3)	High (3)	High (3)	High (3)	High (3)
Landcover change	High (3)	High (3)	High (3)	High (3)	High (3)
Settlement pattern and density	High (3)	High (3)	High (3)	High (3)	High (3)
Visual Sensitivity					
Views and skyline	High (3)	High (3)	High (3)	High (3)	High (3)
Landmarks and impact of built development	High (3)	High (3)	High (3)	High (3)	High (3)
Remoteness and Tranquillity	Moderate (2)	High (3)	High (3)	High (3)	High (3)
Visibility from outside and connections with adjacent landscapes	High (3)	High (3)	High (3)	High (3)	High (3)
Total	23	24	24	24	24
Overall Sensitivity	High	High	High	High	High

APPENDIX 7

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APPENDIX 8

Glossary

*Core Strategy** – A Development Plan Document setting out the spatial vision and strategic objectives of the planning framework for an area, having regard to the Community Strategy.

Cumulative impact – The combined effect of all developments when taken together, both present and those in the future.

Fall over distance – The height of the turbine to the tip of the blade. Also known as the topple height.

Intervisibility – The extent to which one area can see another and vice versa

Kyoto Protocol – An international agreement, signed in 1997, setting targets for industrialised countries to cut their greenhouse gas emissions.

*Landscape Capacity*** – The degree to which a particular landscape character type or area is able to accommodate change without unacceptable adverse effects on its character. Capacity is likely to vary according to the type and nature of change being proposed.

*Landscape Character*** – The distinct and recognizable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

Landscape Character Area – A unique geographic area with a consistent character and identity, defined by geology, landform, soils, vegetation, landuse, settlement and field pattern.

*Landscape Character Assessment*** – An umbrella term for description, classification and analysis of landscape.

*Landscape Character Type*** – A landscape type will have broadly similar patterns of geology, landform, soils, vegetation, landuse, settlement and field pattern discernable in maps and field survey records.

*Landscape Quality*** – About the physical state of the landscape and its intactness, from visual, functional and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.

*Landscape Sensitivity*** – The extent to which a landscape can accept change of a particular type and scale without adverse effects on its character.

*Landscape Value*** – The relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquillity or wilderness, cultural associations or other conservation issues.

*Local Development Framework (LDF)** – The Local Development Framework (LDF) is a non-statutory term used to describe a folder of documents, which includes all the local planning authority's local development documents.

*Local Plan**** – The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. Current core strategies or other planning policies, which under the regulations would

be considered to be development plan documents, form part of the Local Plan. The term includes old policies which have been saved under the 2004 Act.

Microgeneration – Small scale production of heat and/or electricity from low carbon sources.

*Mitigation*** – Measures, including any process, activity or design to avoid, reduce, remedy or compensate for adverse landscape and visual impacts of a development project.

National (Landscape) Typology – A national classification of landscapes, undertaken by Natural England, derived by map analysis of the main physical, biological and cultural factors that determine landscape character.

*Photomontage***** - A visualisation based on the superimposition of an image onto a photograph for the purpose of creating a realistic representation of proposed or potential changes to a view. These are now mainly generated using computer software.

Planning Advice Note (PAN) – Scottish planning document providing advice on good practice and other relevant information.

*Planning Policy Statement (PPS)** – Issued by central government to replace the existing Planning Policy Guidance notes in order to provide greater clarity and to remove from national policy advice on practical implementation, which is better expressed as guidance rather than policy. NB. Most PPSs and PPGs have now been replaced by the National Planning Policy Framework.

*Regional Spatial Strategy (RSS)** – A strategy for how a region should look in 15 to 20 years time and possibly longer. The Regional Spatial Strategy identifies the scale and distribution of new housing in the region, indicates areas for regeneration, expansion or sub-regional planning and specifies priorities for the environment, transport, infrastructure, economic development, agriculture, minerals and waste treatment and disposal.

*Registered Park and Garden** – A park or garden of special historic interest. Graded I (highest quality), II* or II. Designated by English Heritage.

*Renewable and low carbon energy**** - Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels).

*Supplementary Planning Document (SPD)**** – Documents which add further detail to the policies in the Local Plan. They can be used to provide further guidance for development on specific sites, or on particular issues, such as design. Supplementary planning documents are capable of being a material consideration in planning decisions but are not part of the development plan.

*Supplementary Planning Guidance (SPG)** – Supplementary Planning Guidance may cover a range of issues, both thematic and site specific and provide further detail of policies and proposals in a development plan. NB. SPGs should be replaced by SPDs.

Threshold – A specified level beyond which impacts will be unacceptable.

Typology – The classification of items into groups to allow their assessment.

Wireframe^{****} - Also known as 'wirelines' or 'computer generated line drawings'. These are computer generated line drawings, based on digital terrain models (DTM), that illustrate the three-dimensional shape of the landscape in combination with additional elements.

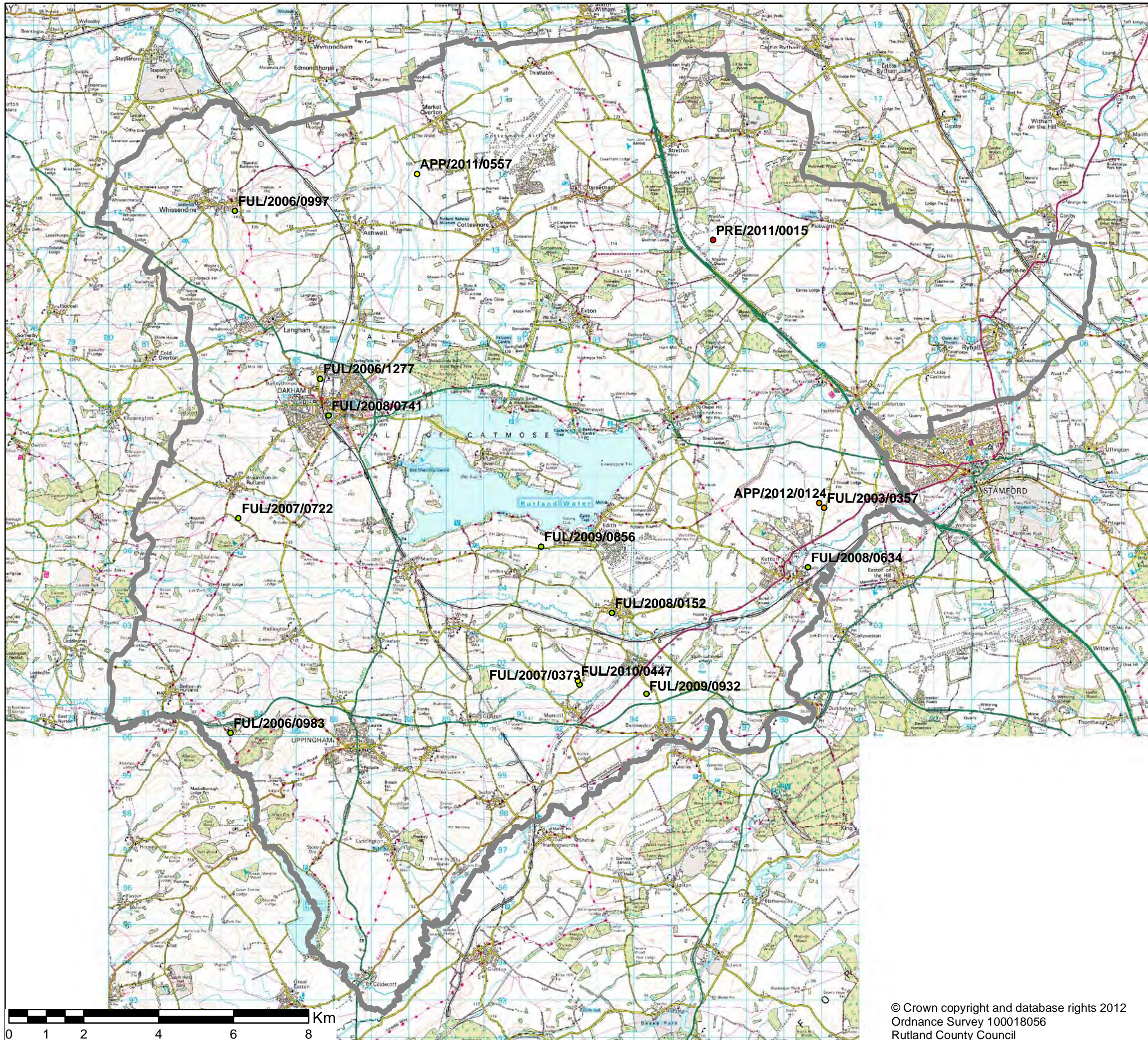
Zone of Theoretical Visibility (ZTV) – Also known as a Zone of Visual Influence (ZVI), Visual Envelope Map (VEM) and Viewshed. This represents the area over which a development can theoretically be seen, based on digital terrain data.

* = as defined in the Glossary of Planning Terms on the Planning Portal website

** = as defined in the Glossary section of Guidelines for Landscape and Visual Impact Assessment 2nd edition

*** = as defined in the Glossary of the National Planning Policy Framework

**** = as defined in the Glossary section of Visual Representation of Windfarms Good Practice Guidance



Key

County Boundary

Scale of Wind Turbine Developments in Rutland

- Domestic scale
- Small scale
- Medium scale
- Large scale

NB To be read in conjunction with the schedule of Planning Applications Received provided in Appendix 1 to the report

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

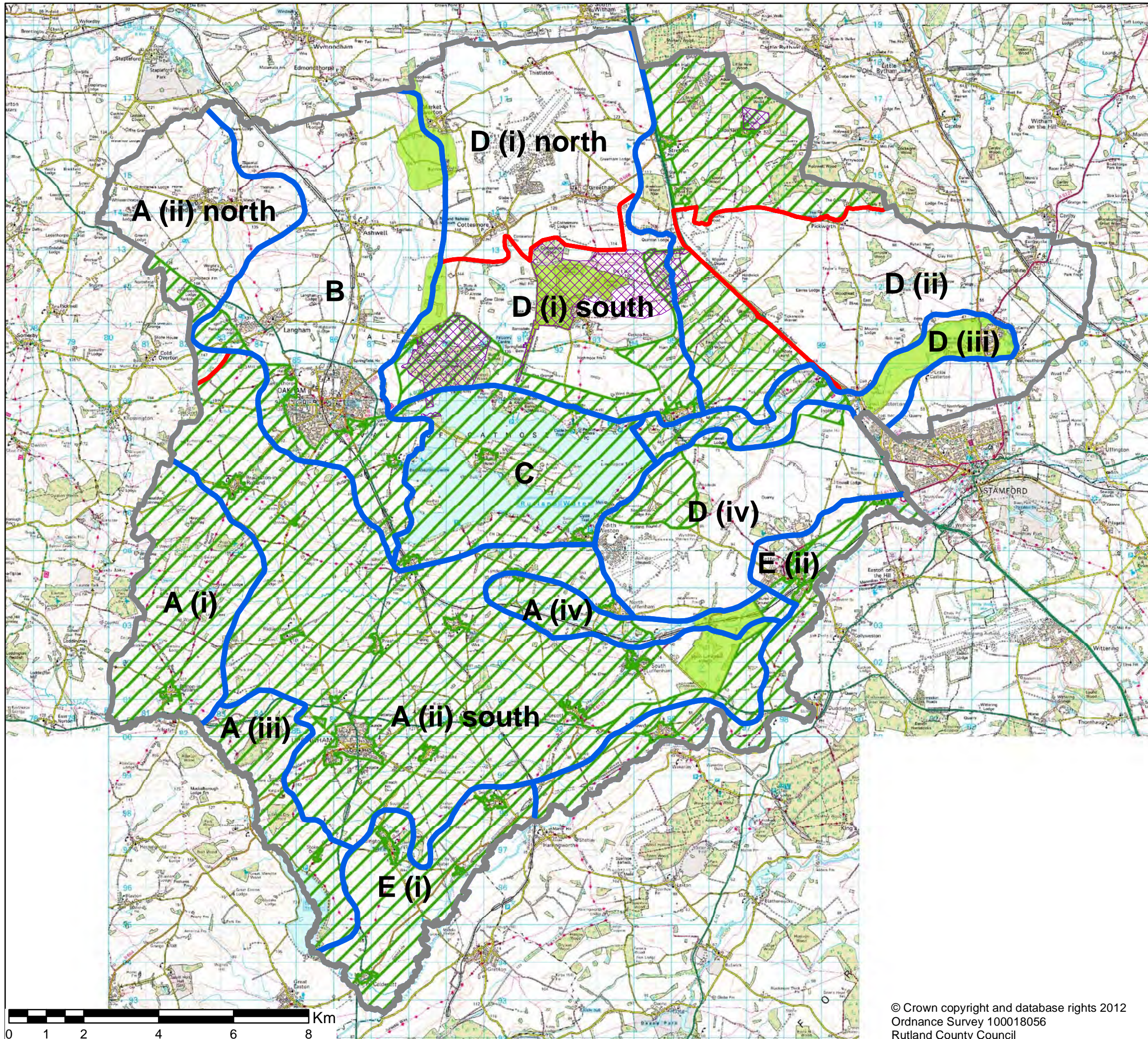
Drawing Title:
Location Plan

Figure Number: Figure 01







Scale: 1:100,000

Date: May 2012





Key

-  County Boundary
-  Rutland Landscape Character Areas
-  Amended Landscape Character Areas
-  Areas of Particularly Attractive Countryside
-  Areas of Local Landscape Value
-  Registered Parks and Gardens

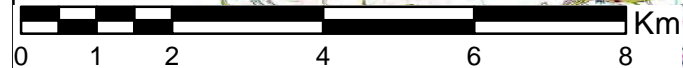
Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

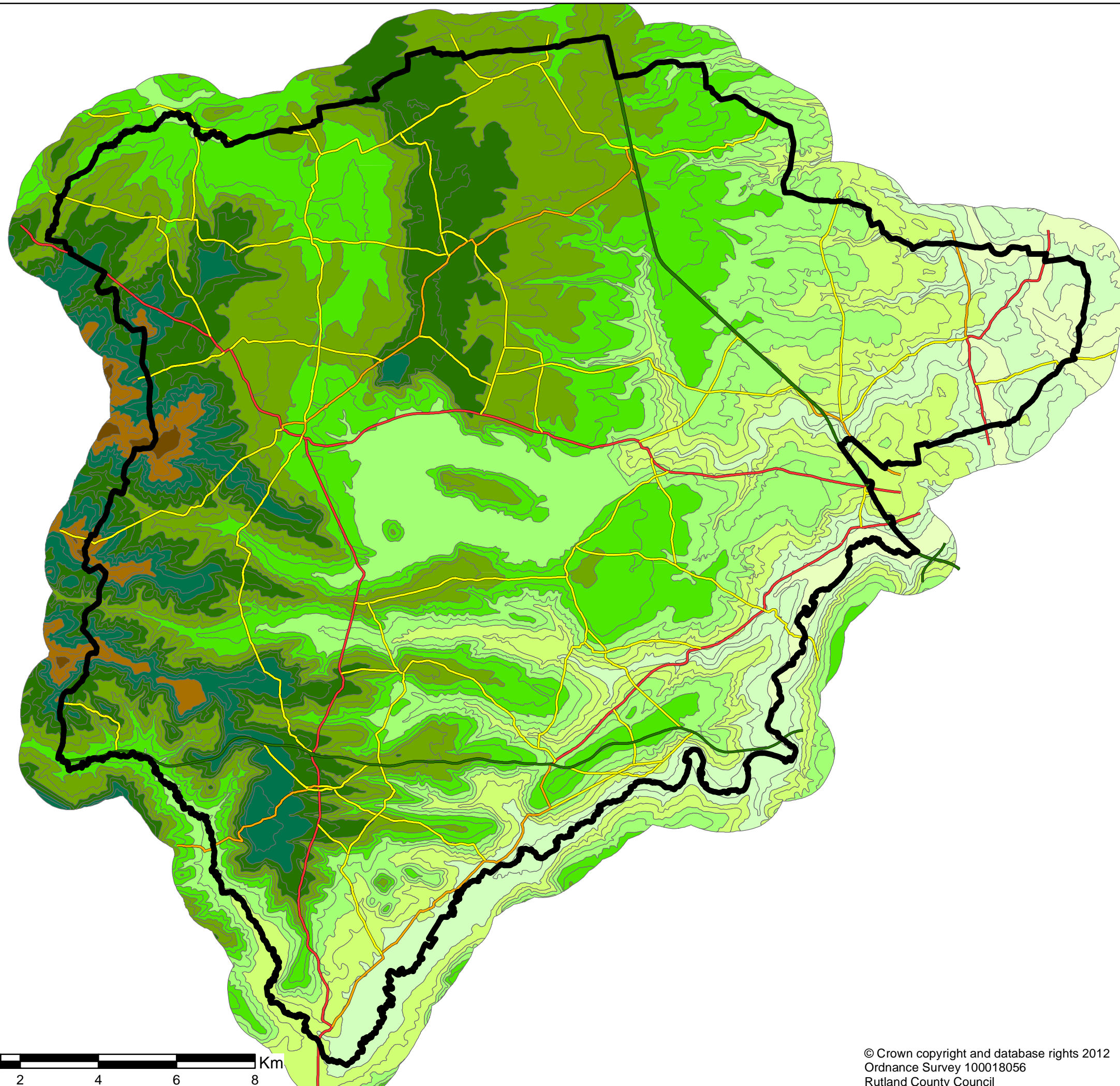
Drawing Title:
Landscape Character Areas and Landscape Designations

Figure Number: Figure 02






Scale: 1:100,000

Date: May 2012















Key

-  County Boundary
-  Trunk Roads
-  A Roads
-  B Roads
-  C Roads

Topography

-  Less than 30m AOD
-  30-50m
-  50-70m
-  70-90m
-  90-110m
-  110-130m
-  130-150m
-  150-170m
-  170-190m
-  190m + AOD

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

Drawing Title:
Topography

Figure Number: Figure 03

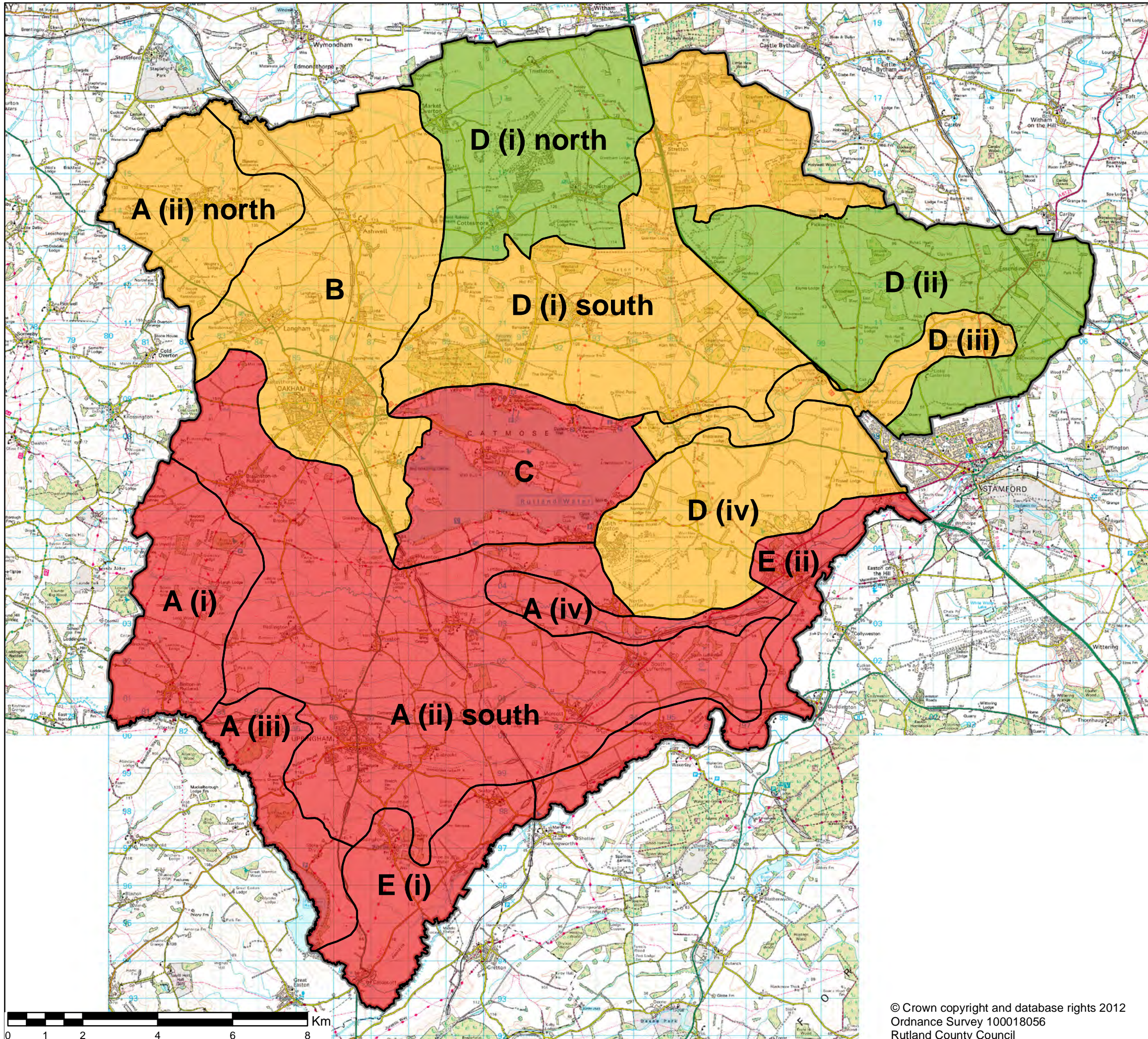
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Date: May 2012



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Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

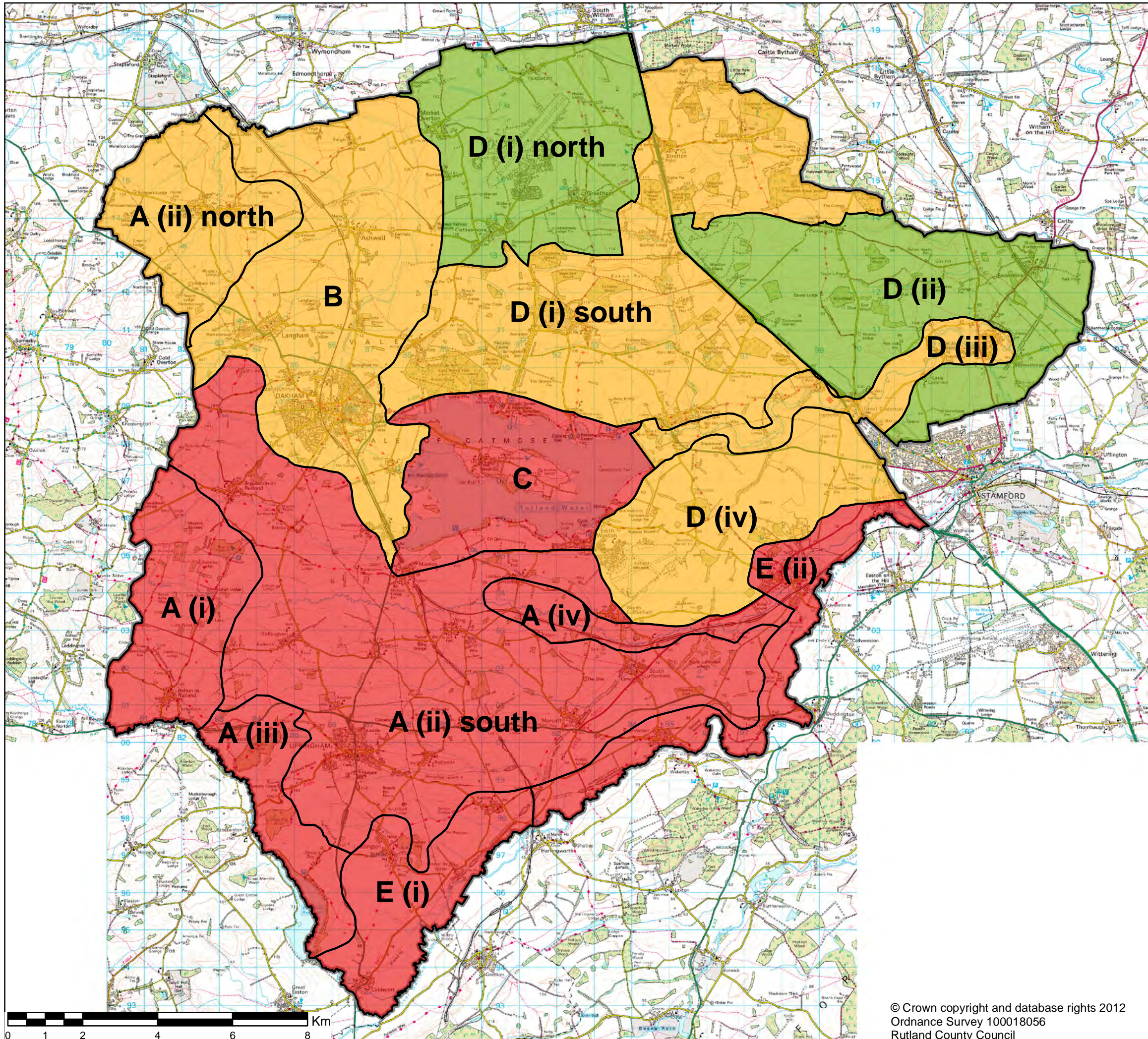
Drawing Title:
Landscape Capacity - Small Turbines,
Single Turbine

Figure Number: Figure 04A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

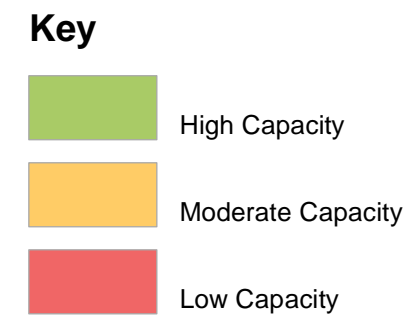
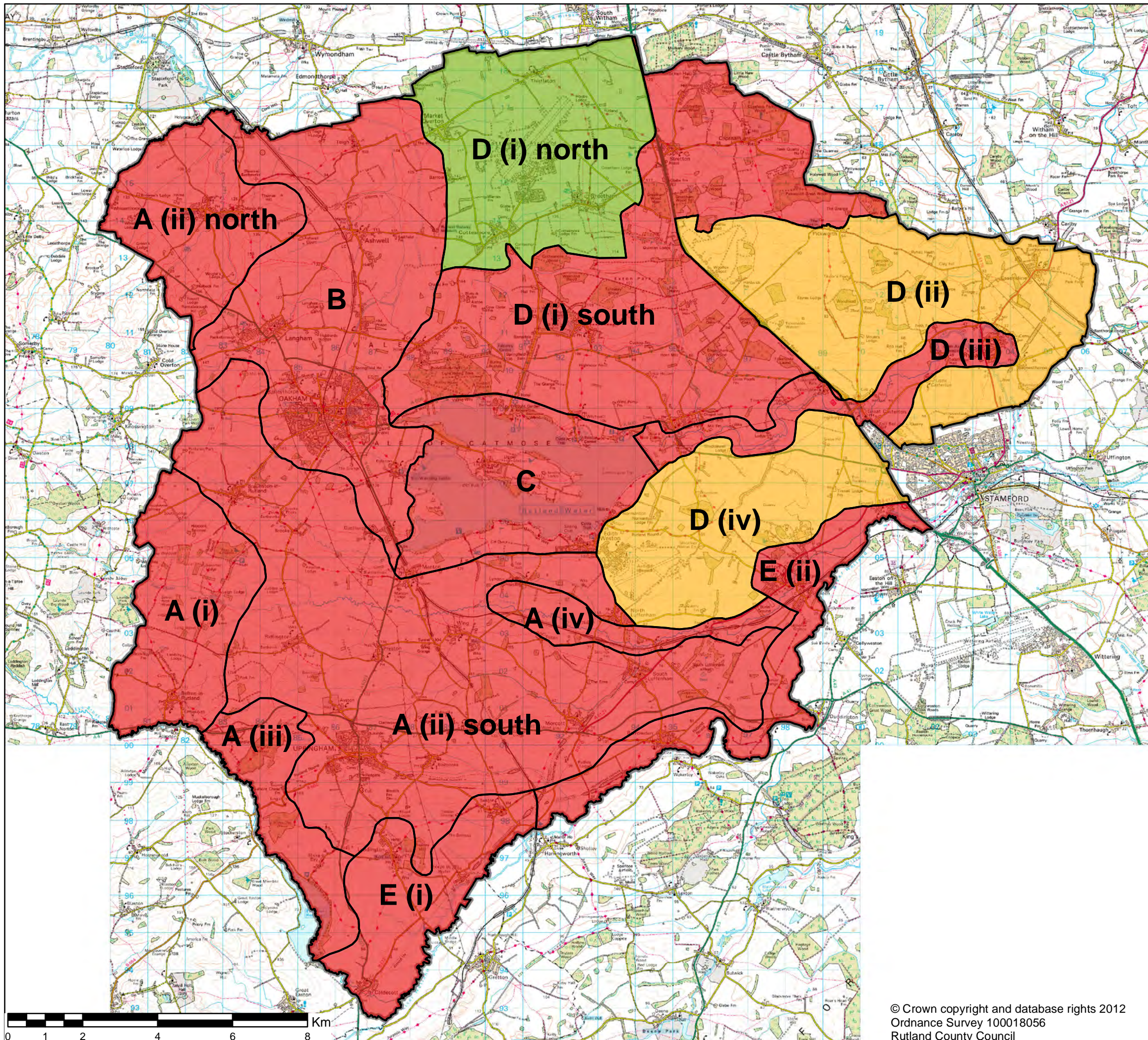
Drawing Title:
Landscape Capacity - Small Turbines,
Small Scale Group (2-5)

Figure Number: Figure 05A

Scale: 1:100,000

Date: September 2012





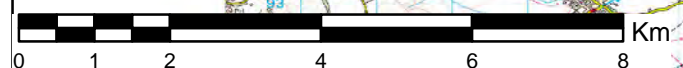
Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

Drawing Title:
Landscape Capacity - Small Turbines,
Small to Medium Scale Group (6-11)

Figure Number: Figure O6A

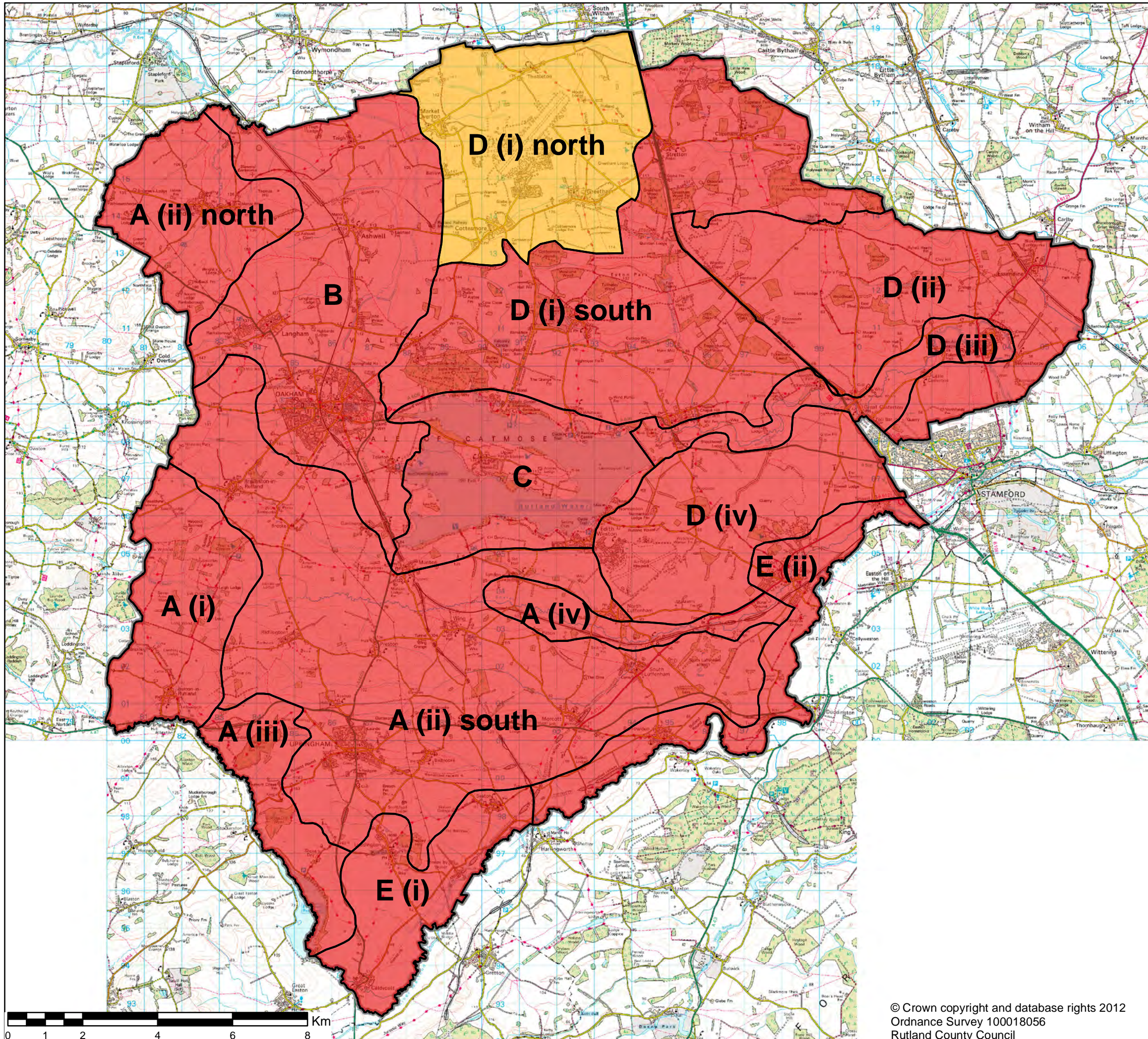
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Date: September 2012



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Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

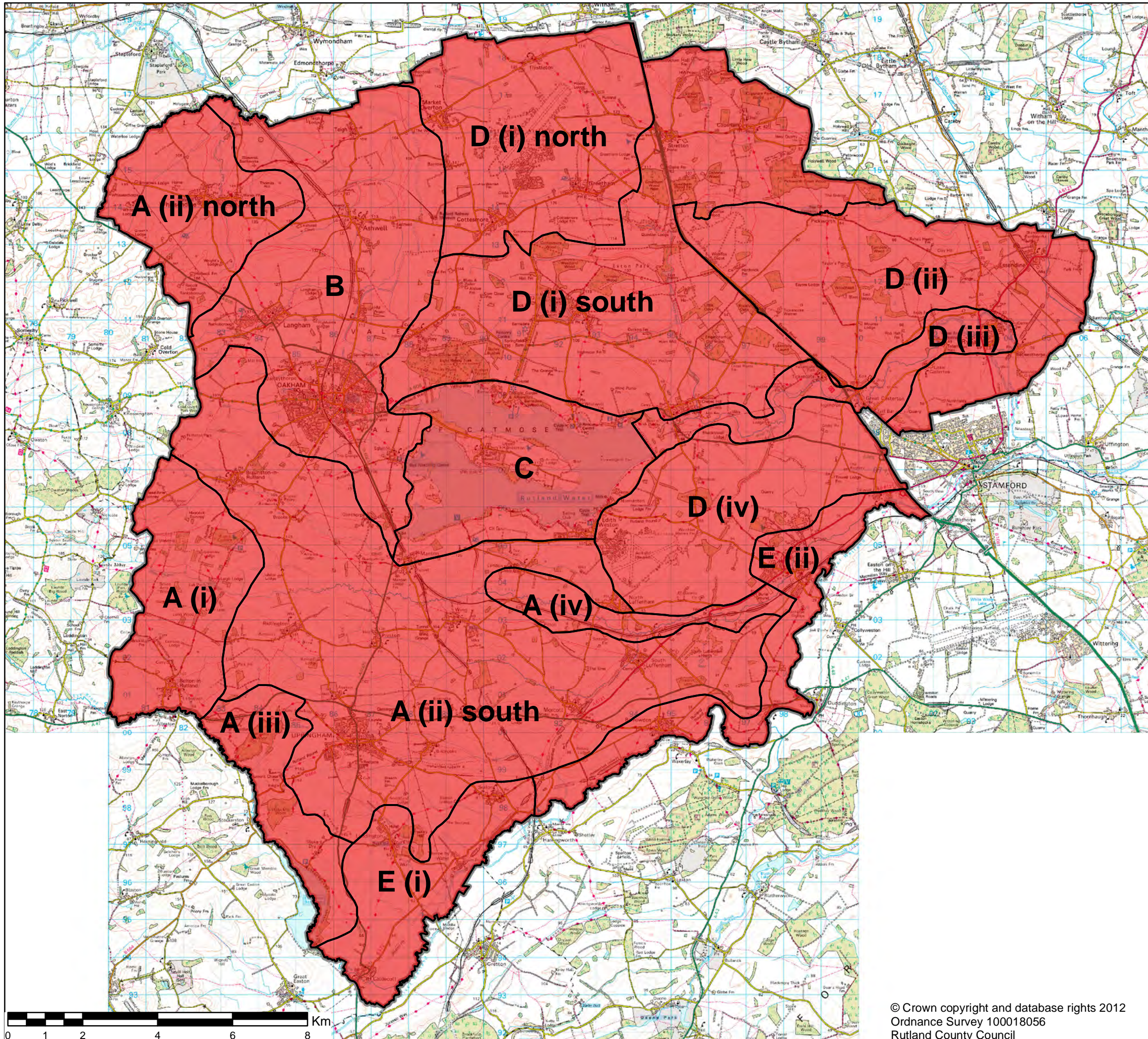
Drawing Title:
Landscape Capacity - Small Turbines,
Medium Scale Group (12-16)

Figure Number: Figure 07A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

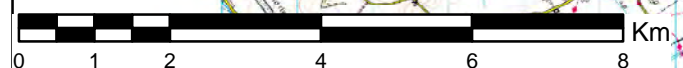
Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

Drawing Title:
Landscape Capacity - Small Turbines,
Large Scale Group (17+)

Figure Number: Figure 08A

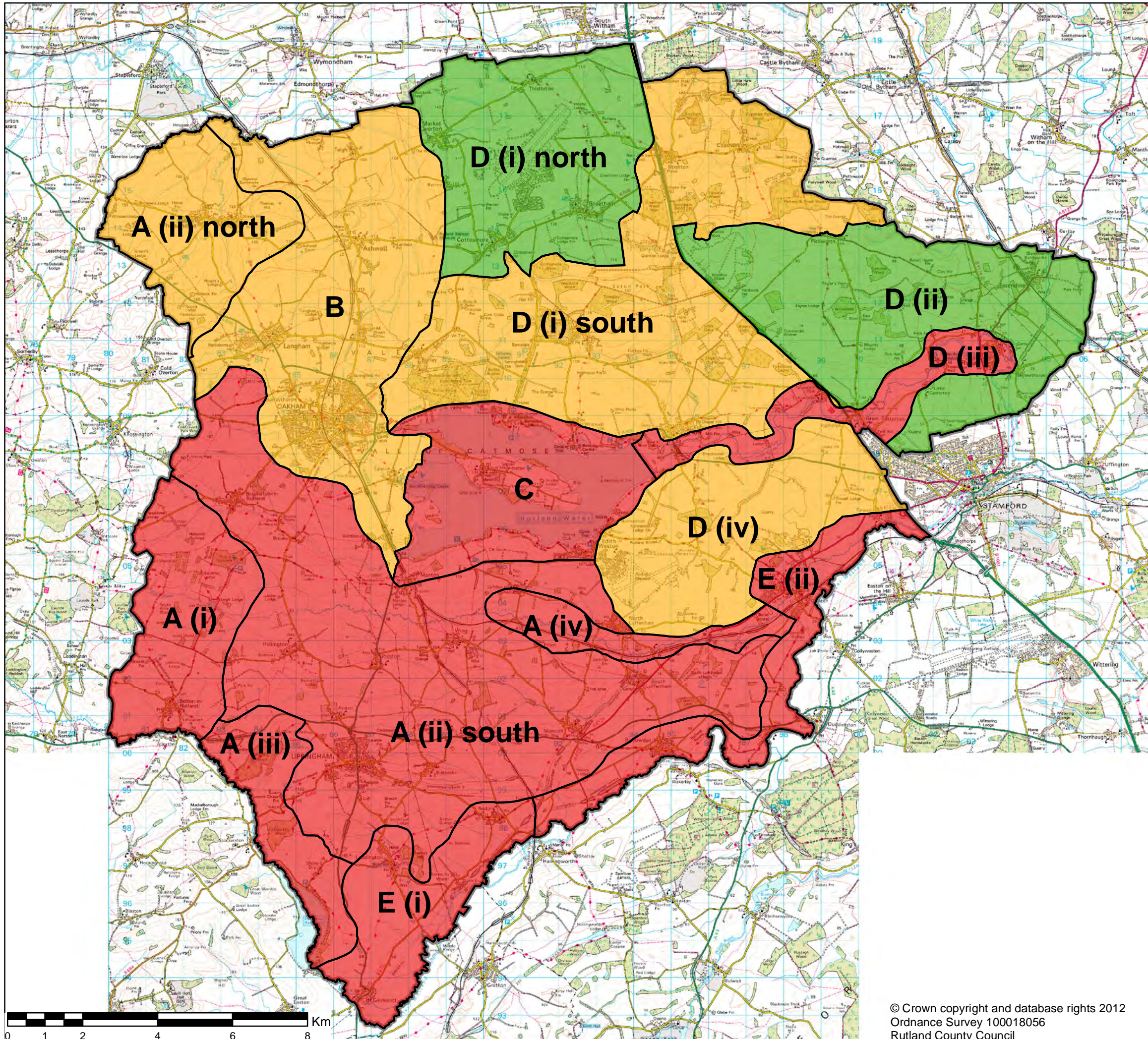
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Date: September 2012



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Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

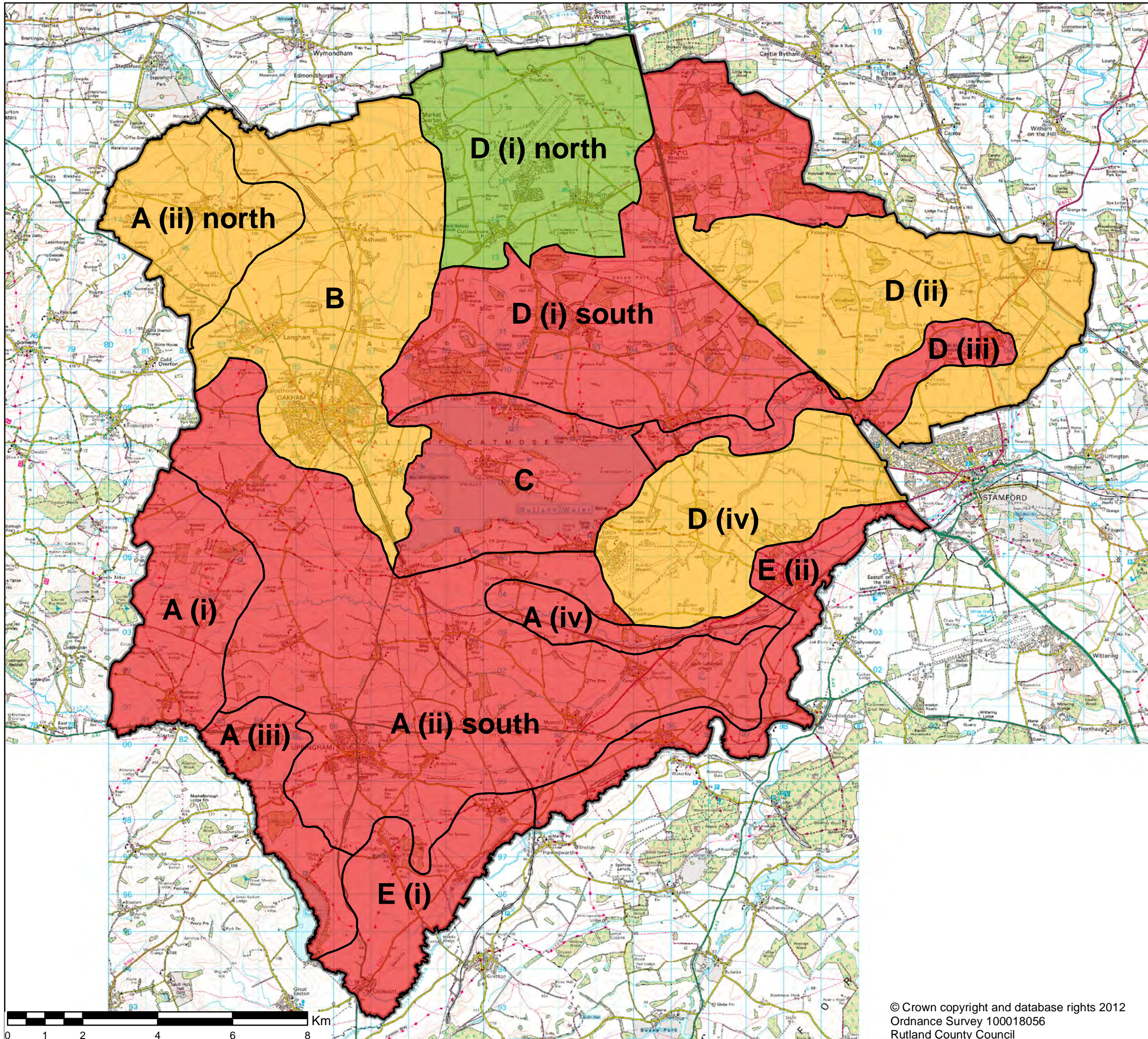
Drawing Title:
Landscape Capacity - Medium Sized Turbines, Single Turbine

Figure Number: Figure 09A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

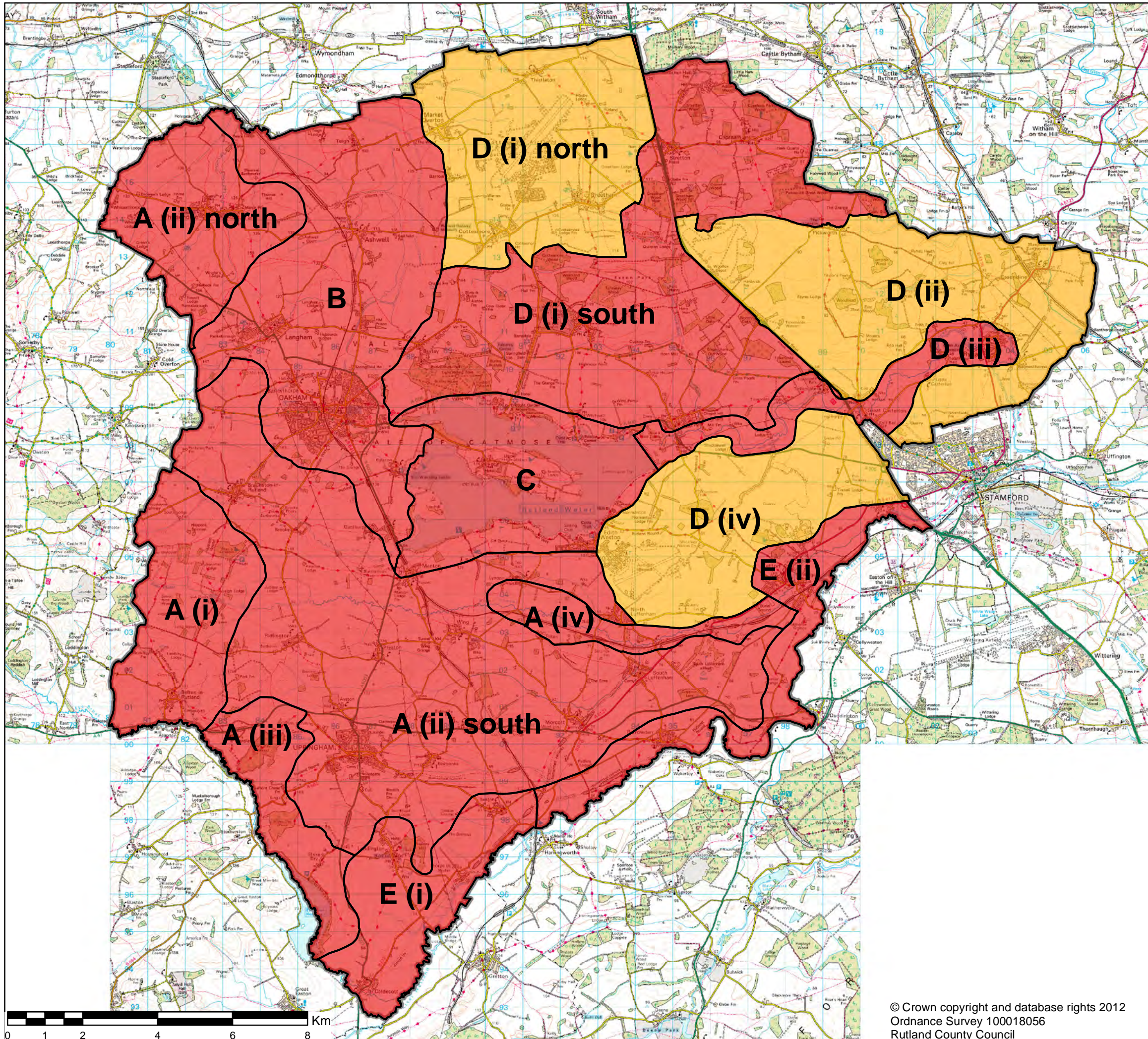
Drawing Title:
Landscape Capacity - Medium Sized Turbines, Small Scale Group (2-5)

Figure Number: Figure 10A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

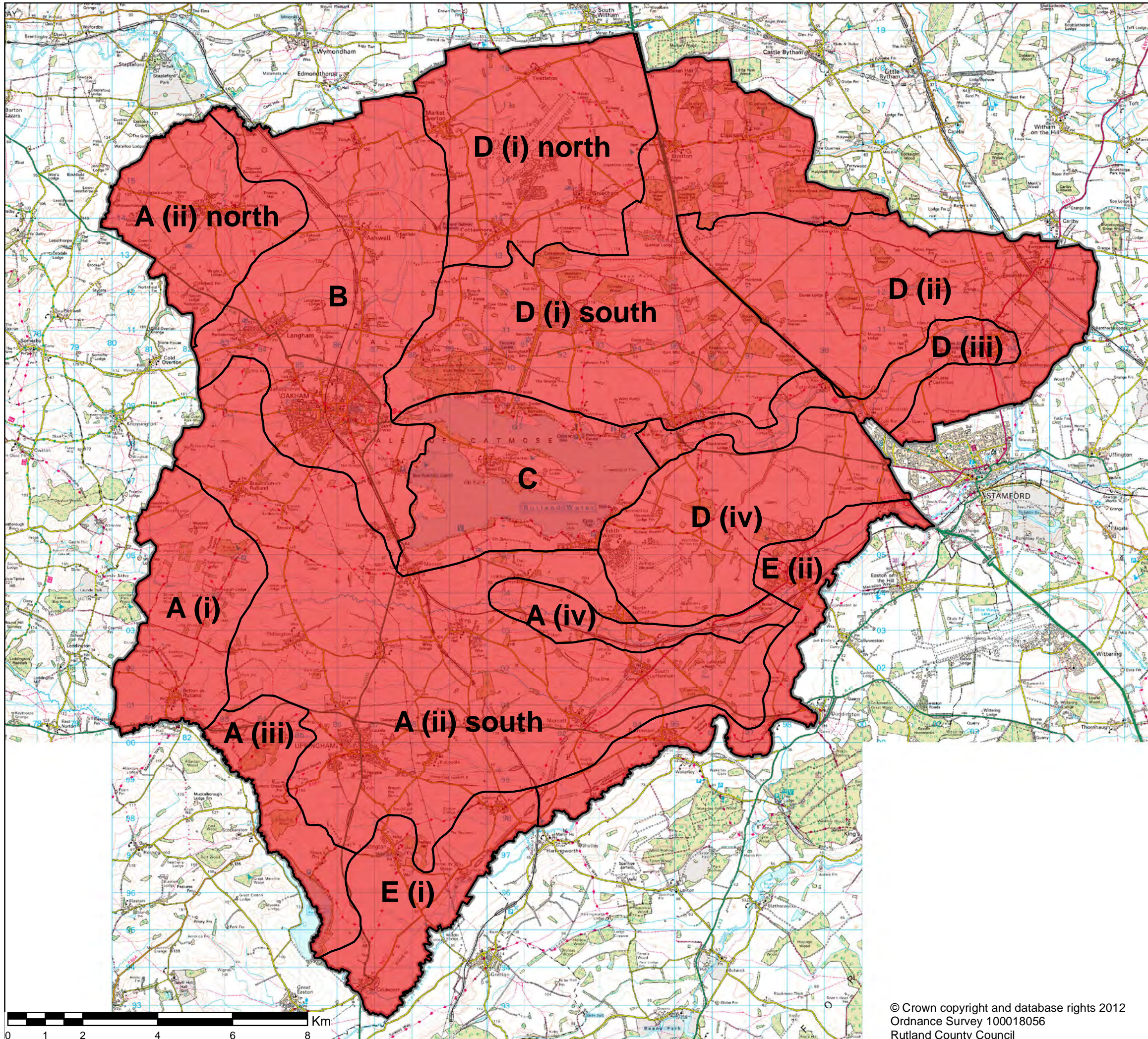
Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines
 Drawing Title: Landscape Capacity - Medium Scale Turbines, Small to Medium Scale Group (6-11)
 Figure Number: Figure 11A
 Scale: 1:100,000

Date: September 2012



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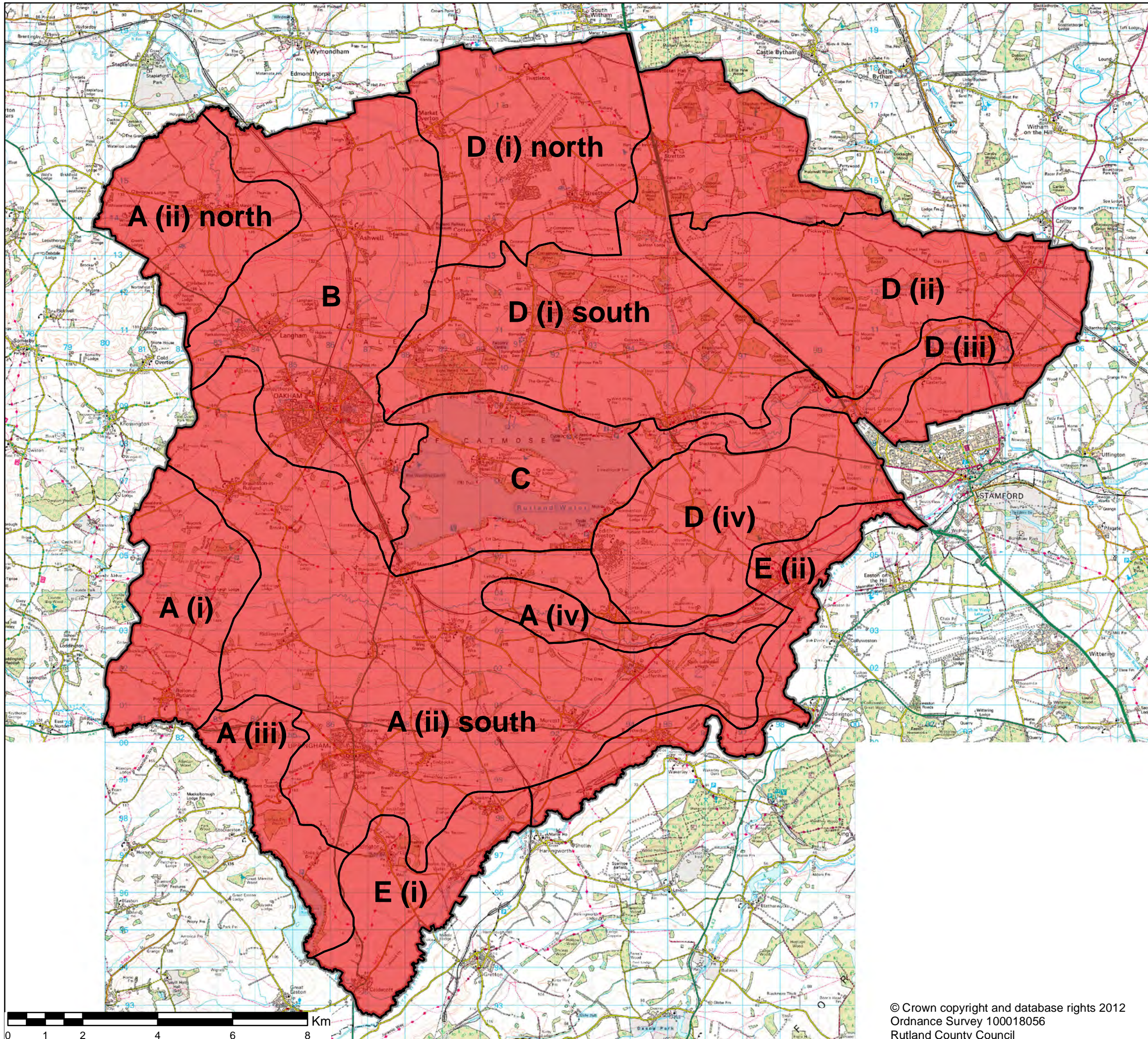
Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines
 Drawing Title:
 Landscape Capacity - Medium Size Turbines, Medium Scale Group (12-16)
 Figure Number: Figure 12A
 Scale: 1:100,000

Date: September 2012





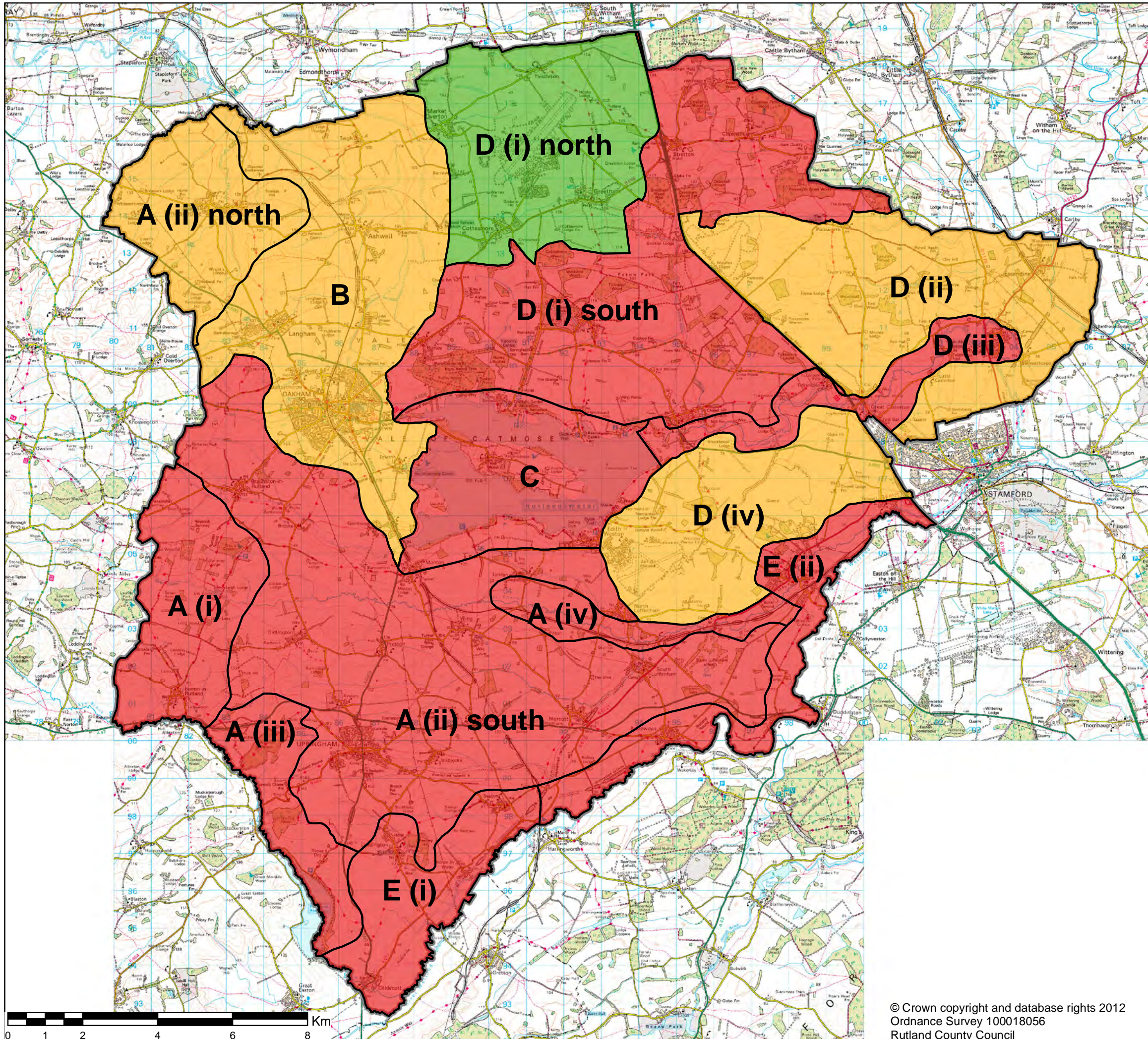
Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines
 Drawing Title:
 Landscape Capacity - Medium Sized Turbines, Large Scale Group (17+)
 Figure Number: Figure 13A
 Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

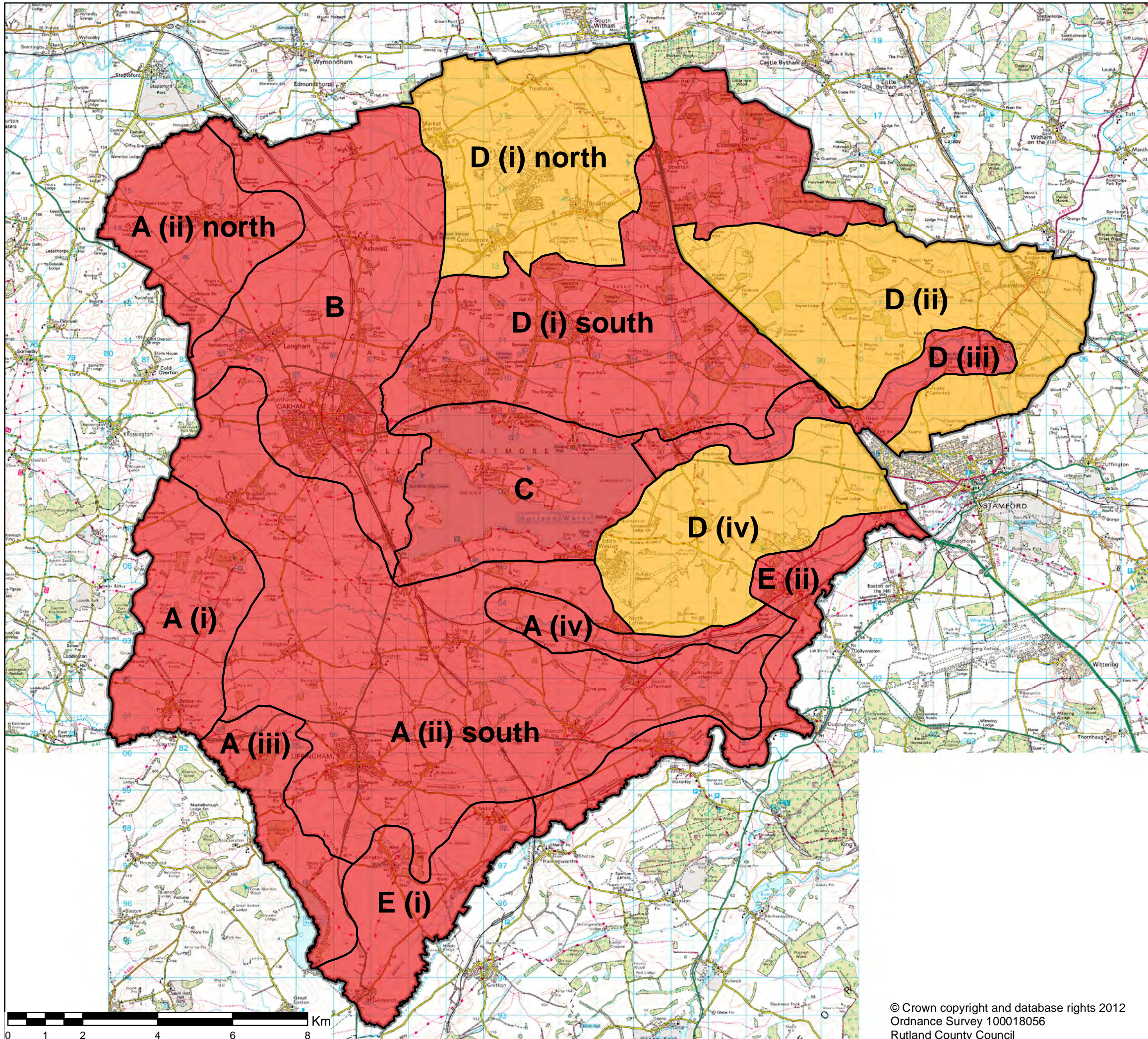
Drawing Title:
Landscape Capacity - Large Turbines,
Single Turbine

Figure Number: Figure 14A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

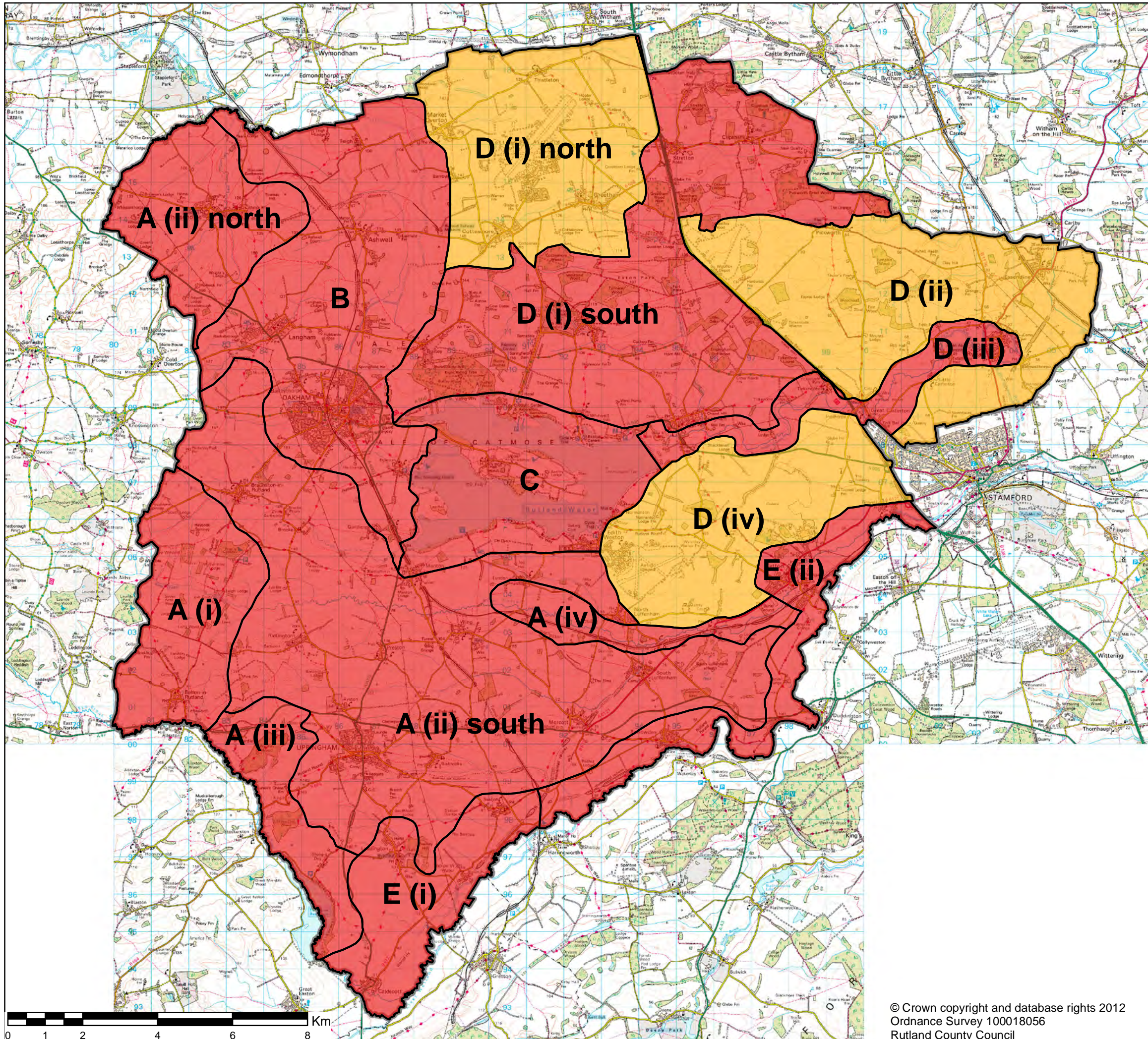
Drawing Title:
Landscape Capacity - Large Turbines,
Small Scale Group (2-5)

Figure Number: Figure 15A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

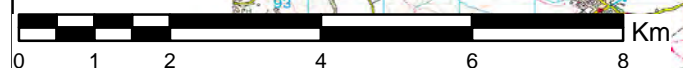
Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

Drawing Title:
Landscape Capacity - Large Turbines,
Small to Medium Scale Group (6-11)

Figure Number: Figure 16A

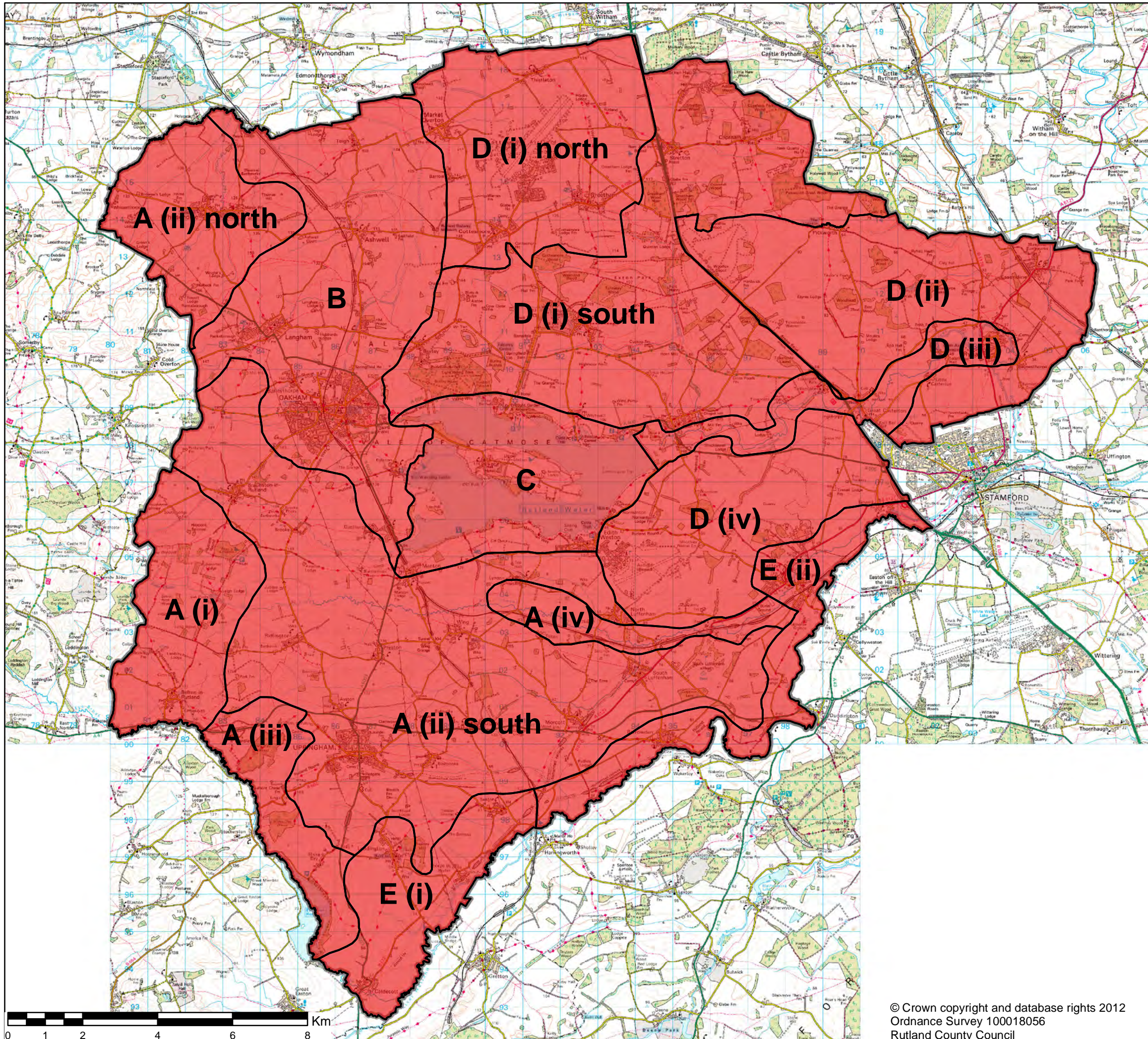
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Date: September 2012



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Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

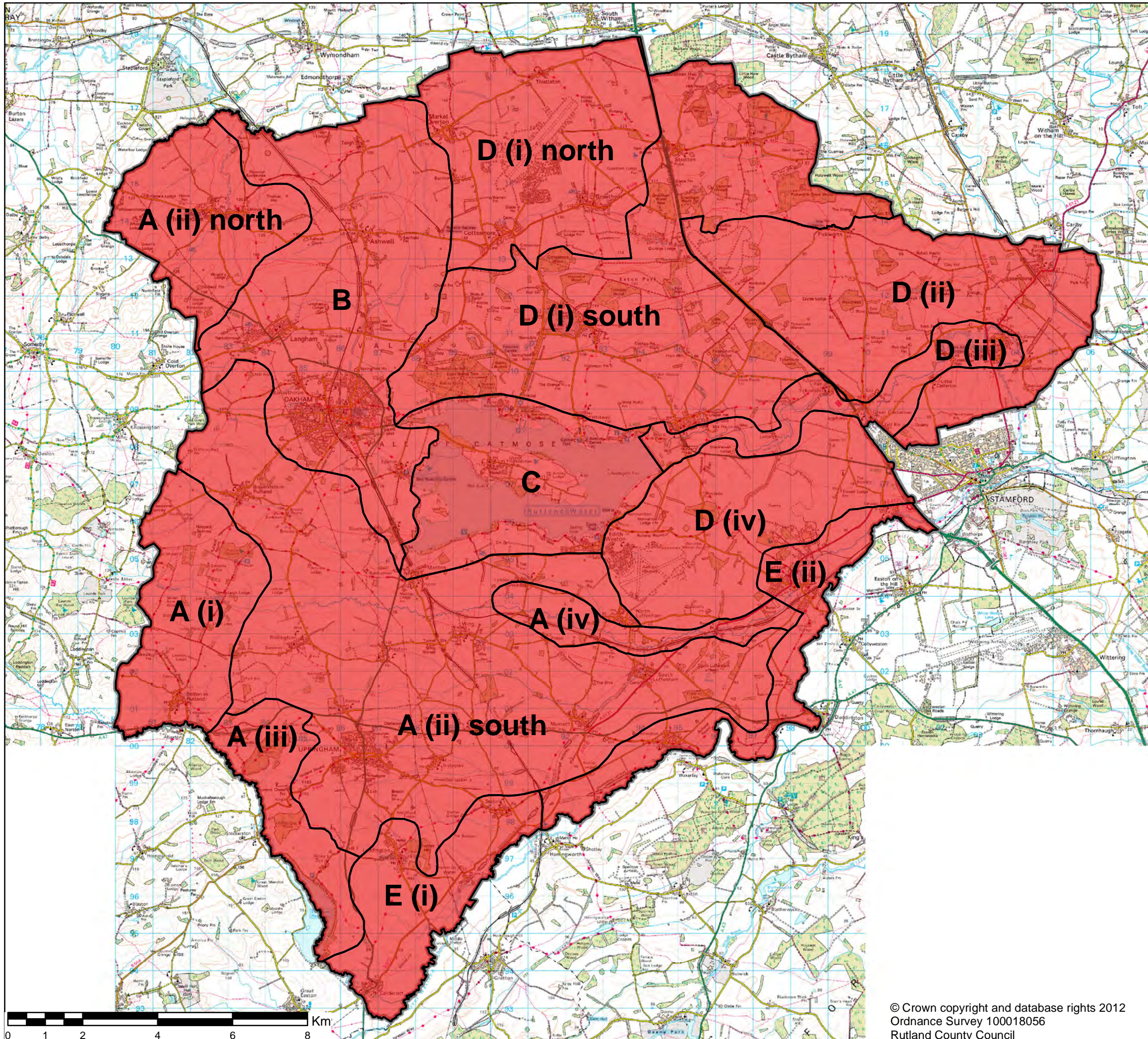
Drawing Title:
Landscape Capacity - Large Turbines,
Medium Scale Group (12-16)

Figure Number: Figure 17A

Scale: 1:100,000

Date: September 2012





Key

- High Capacity
- Moderate Capacity
- Low Capacity

Project: Rutland Landscape Sensitivity and Capacity Study - Wind Turbines

Drawing Title:
Landscape Capacity - Large Turbines,
Large Scale Group (17+)

Figure Number: Figure 18A

Scale: 1:100,000

Date: September 2012



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