RUTLAND
LOCAL PLAN

Wind Turbine Developments

Supplementary Planning Document

Rutland
County Council

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Title
Wind Turbine Developments Supplementary Planning Document

Subject matter
To provide more detailed guidance on the key issues that will need to be considered when planning for wind turbine developments in Rutland.

Adoption Date
The Wind Turbine Developments Supplementary Planning Document was adopted by Rutland County Council on 12 November 2012.

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1. Introduction

1.1 This purpose of this document is to provide more detailed guidance on the key issues that will need to be considered when planning for wind turbine developments in Rutland.

1.2 When adopted by the Council the document will be a material consideration when considering planning applications for wind turbines in Rutland. It does not introduce new policy but rather it is intended to elaborate on, and be consistent with, existing and emerging development plan policies.

1.3 It does not provide a comprehensive guide on all the issues to be considered but rather it focuses on issues considered relevant to Rutland. There is a wide range of other guidance available as part of national planning policy and from a range of other sources.

1.4 The guidance primarily relates to medium and large scale wind turbines (50-150m+ in height) which form the majority of commercial scale developments although the guidance will also be applicable to smaller sized wind turbines (<50m in height).

1.5 The document must be considered as a whole and all parts of the guidance read together.

2. Need for this guidance

2.1 General policy criteria relating to wind turbines are set out in Policy CS20 of the Rutland Core Strategy. This states that:

> 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.

2.2 A more detailed policy on wind turbines is being developed as part of the Site Allocations and Polices DPD which it is intended will identify the key issues that need to be addressed in planning applications for wind turbine developments.

2.3 Consultation on the Issues and Options version of the Site Allocations and Policies DPD document showed a number of concerns being raised that a supplementary planning document should be urgently prepared to provide more detailed guidance on issues such as separation distances from dwellings, noise and shadow flicker.

3. National and Regional Planning Policy

3.1 The National Planning Policy Framework (NPPF) ([4]) states that local planning authorities should 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.

3.2 The NPPF also states that local planning authorities should follow the approach in the National Policy Statement for Renewable Energy Infrastructure EN-3 ([6]) read with the Overarching Statement for Energy Infrastructure EN-1 ([5]) in assessing the likely impacts of potential wind energy developments, in identifying suitable areas and in determining planning applications for such development.

3.3 Further government guidance on renewable energy is contained in the Planning for Renewable Energy Companion Guide to PPS22 ([0]). Previous government guidance in PPS1 Supplement on Climate Change ([2]) and PPS22 Renewable Energy ([18]) has now been replaced by the NPPF.

3.4 The East Midlands Regional Plan ([9]) states that local planning authorities should establish criteria to guide and inform wind energy projects and Policy 40 of the plan sets out the issues that should be considered in establishing the criteria. The Regional Plan is shortly to be abolished by the Localism Act.

4. Background Evidence

4.1 The Council has commissioned a study of the sensitivity and capacity of the landscape in Rutland ([12]) to accommodate wind turbine developments in Rutland which has informed the proposed approach below.

4.2 A Planning for Climate Change Study ([11]) carried out for the Council in July 2008 identified potential opportunities for wind turbines in Rutland and a number of Leicestershire authorities but did not provide detailed criteria for considering proposals.

4.3 A range of other local evidence is also available that may be relevant to the consideration of wind turbines in Rutland, for example the Rutland Landscape Character Assessment (2003) and the Leicestershire, Leicester and Rutland Historic Landscape Characterisation Project (2010)([13]).

4.4 There is already considerable guidance relating to wind turbines in the National Policy Statements for Energy Infrastructure and the PPS22 Companion Guide, the relevant parts of which are referred to below.

4.5 The criteria to be considered are shown in the shaded boxes below. Non compliance with an individual criterion does not necessarily preclude a wind turbine development but is likely to count against the scheme in terms of the balance of benefits against harm.

5. Procedures for dealing with planning applications

5.1 Rutland County Council is the planning authority for wind turbine developments of 50MW generating capacity or less in its area. Larger installations of more than 50MW are subject to separate procedures, which from 1 April 2012 will be determined by the Secretary of State, with the Council as a statutory consultee.

5.2 The Council will consult and liaise with neighbouring local authorities and have regard to any potential impacts on neighbouring areas when considering applications for wind turbine developments in Rutland.

5.3 Wind Turbines are projects that are listed under Schedule 2. of the Town and Country Planning (Environmental Impact Assessment) Regulations (2011). These require the local authority to screen applications for the need for Environmental Impact Assessment (EIA) where:

- more than 2 turbines are proposed;
- the hub height of any turbine or any other structure exceeds 15 metres;
- the proposal lies within a “sensitive area” (these include Sites of Special Scientific Interest and European Sites such as Rutland Water and scheduled monuments).

5.4 Where an EIA is required the planning application will need to be accompanied by an environmental statement prepared by the applicant that assesses the impact that the project is likely to have on the local environment. This must cover a wide range of issues including consequences for flora and fauna, landscape and visual impact.

5.5 Where a proposal does not require a full EIA the Council may still require relevant issues to be addressed in an environmental statement to accompany a planning application.

5.6 The applicant may request from the Council a screening opinion as to whether an EIA will be required and/or a scoping opinion as to the information to be included in an environmental statement.

5.7 Pre application discussions with the Council are encouraged in order to agree the information that will be required to accompany a planning application and the contents of the environmental statement. There will however be charge for this service in accordance with the scale of charges on the Council’s website.

5.8 Further guidance on the information to accompany planning applications for wind turbine developments is contained in the PPS22 Companion Guide.

6. Proposed Guidance

6.1 Landscape impact

6.1.1 Rutland has an attractive and varied landscape. It will be important to ensure that this is not damaged by inappropriate development but also to recognise that there will be a need to accommodate renewable energy developments where needed to meet regional, national and international obligations.

6.1.2 The NPPF ([4]) states that local planning authorities should 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.

6.1.3 The Overarching Statement for Energy Infrastructure (EN-1) advises that 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, all of which need to be considered in judging the impact of a project on landscape.

6.1.4 The National Policy Statement for Renewable Energy Infrastructure (EN-3) advises that that there will always be significant landscape and visual impacts from modern onshore wind turbines and 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.

6.1.5 The PPS22 Companion Guide states that character areas could form the basis for considering which technologies at which scale may be appropriate in different types of location but it will not be appropriate to identify specific locations or prescribe a particular technology on a particular site as a result of any landscape assessment.

6.1.6 Core Strategy Policy CS20 indicates that wind turbines and other low carbon energy generating will be supported where issues including landscape and visual impact and the number and size of wind turbine developments and their cumulative impact can be addressed satisfactorily.

6.1.7 The Landscape Sensitivity and Capacity Study ([12]) commissioned by the Council has considered the capacity of the landscape in Rutland to accommodate wind turbine developments according to the size of the turbines involved and different scales of groupings.

6.1.8 Table and maps summarising the capacity of the landscape character areas to accommodate wind turbine developments of different sizes and scales of groupings are included in Appendix 1.

6.1.9 The study has shown high capacity to accommodate single large turbines (100m and above) in one area in the north of Rutland but otherwise low capacity for groups of large turbines across much of the south and central parts of the county with some areas of moderate capacity in the north and east.

6.1.10 In terms of medium sized turbines (50-99m high) the study showed high capacity for single turbines in two areas in the north or east of the county but low capacity for groups of large turbines across much of the south and central parts of the county with some areas of moderate capacity for small and small to medium groups in the north, east and west.

6.1.11 The study provides overall guidance on the suitability of the landscape in Rutland to accommodate different sizes and scales of wind turbine which will help determine the most suitable locations for wind turbines in Rutland. However, individual proposals will be treated on their merits on the basis of the environmental statement and other relevant information.

WT1 – Landscape

Wind turbine developments should have regard to the key characteristics of the landscape character area within which they are situated and the capacity of the landscape character area to accommodate the scale of development proposed.

Wind turbine developments will generally be favoured in high landscape capacity areas or moderate landscape capacity areas for wind turbines as identified in the Rutland Landscape Sensitivity and Capacity Study (see Appendix 1 and maps at the end of this document) having regard to the size and scale of the turbines concerned and other relevant factors.

Outside these areas wind turbine developments are unlikely to be favoured unless it can be demonstrated that the proposal would not be harmful to the key characteristics of the landscape that have been identified in these areas.

All wind turbine developments will be expected to be laid out, designed and located to minimise the impact on the landscape and appropriate mitigation measures taken in order to reduce or ameliorate any potential effects (see WT14 and WT15 below).

6.2 Visual impact

6.2.1 Visual impact refers to the effect on views from built-up areas, settlements and individual properties and views from publicly accessible land, rights of way and other locations.

6.2.2 The Landscape Sensitivity and Capacity study commissioned by the Council recommends that wind turbines within the dominant zone of any property (see Appendix 2 of this document) are unlikely to be considered acceptable in visual terms and within the prominent zone of a settlement (see Appendix 2) will need to be carefully considered as set out in WT2 below.

6.2.3 Planning applications should be supported by a landscape and visual impact assessment (LVIA) based on good practice guidelines which should include a detailed assessment that evaluates the existing landscape in terms of its sensitivity, capacity and ability to accommodate change.

6.2.4 Applicants are recommended to float a balloon or “blimp” on site at the height of the proposed turbine(s) in order to help demonstrate to the decision makers the potential visual impact of the proposal.

WT2 – Visual impact

Wind turbine proposals within the dominant zone of any property (see Appendix 2 of this document) are unlikely to be considered acceptable in visual terms, unless existing features can be proven to fully screen views of the turbines.

Wind turbine proposals within the prominent zone of a settlement (see Appendix 2 of this document) 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.

6.3 Cumulative Impact

6.3.1 Due to the large scale of wind turbine developments, there is potential for a number of separate developments which individually might be acceptable to cumulatively have a more significant effect in terms of their visual, landscape and other impacts.

6.3.2 Cumulative impacts may also arise from extensions to existing wind turbine developments and across county boundaries.

6.3.3 The cumulative impact of wind turbine developments is one of the issues required to be addressed in Core Strategy Policy CS20.

6.3.4 The NPPF ([4]) states that local planning authorities should 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.

6.3.5 The Landscape Sensitivity and Capacity Study ([12]) commissioned by the Council recommends that a cumulative assessment study should be carried out for wind turbine proposals within 10km of any existing or consented schemes proposal which should include a range of wireframes and photo montages to demonstrate cumulative effects.

6.3.6 The study also recommends criteria and thresholds for assessing cumulative visual impact which are set out in WT3 below.

WT3 – Cumulative impact

The cumulative impact of wind turbine developments in terms of landscape and visual impact and other relevant factors will be assessed on a case by case basis.

Planning applications for wind turbine developments including extensions to existing wind turbine developments will be expected to include an assessment of the cumulative impact that the proposal would have together with other existing, approved, proposedand operational wind turbines. The assessment should include a range of wire frames and photomontages to demonstrate any cumulative effects.

Proposals for new wind turbine developments within 1.6 km (for turbines under 50m height), 2.4-3.4 km (for 50-99m height turbines) and 4km (for turbines at 100m and above) of existing turbine developments are unlikely to be acceptable in visual terms unless they are designed to appear as part of a coherent extension to an existing group and do not result in any unacceptable visual harm including impacts on residential locations.

6.4 Shadow flicker and reflected light

6.4.1 Shadow flicker is the effect of the sun passing behind the rotors of a moving wind turbine and casting a shadow or “flicker”. Further discussion and guidance on this matter is contained in the PPS22 Companion Guide (paragraphs 73-78).

6.4.2 The National Policy Statement for Renewable Energy Infrastructure (EN-3) advises that the potential significance of the effect is dependent on a range of factors and that research and computer modelling demonstrating that there is unlikely to be a significant impact at distances greater than 10 rotor diameters.

6.4.3 The PPS22 Companion Guide states that shadow flicker will only affect properties within 130 degrees either side of north relative to the turbines and that the likelihood of this occurring will depend on a range of factors including direction, distance, turbine height, time of year and prevailing wind direction.

6.4.4 The PPS22 Companion Guide states that shadow flicker can be mitigated by siting wind turbines at a sufficient distance from dwellings likely to be affected and the effects have been proven to occur only within ten rotor diameters of a turbine.

6.4.5 The recommended minimum separation distances from dwellings (see WT6 below) would assist in minimising shadow flicker effects of any wind turbines subject to consideration of local circumstances. Mitigation measures may be available to eliminate or reduce the effects of shadow flicker.

6.4.6 Turbines can also cause flashes of reflected light which the PPS22 Companion Guide states can be reduced by careful choice of blade colour and surface finish, such as light grey semi-matt finishes and other colours and patterns.

6.4.7 There may also be impacts on other activities, for example distraction to playing of sports caused by moving turbine blades and their shadows. Further guidance on the impact of wind turbines on playing fields and sporting activities is to be issued by Sport England.

WT4 – Shadow Flicker

A separation distance of at least 10 times rotor diameters (i.e. the diameter of the swept area) is recommended from wind turbines to the nearest residential dwelling in order to minimise the effects of shadow flicker.

Wind turbines should be designed in terms of colour and surface finish to minimise flashes of reflected light.

Where necessary mitigation measures should be taken to reduce or eliminate the effects of shadow flicker to an acceptable level.

6.5 Noise

6.5.1 The report ETSU-R-97 “The Assessment and Rating of Noise from Wind Farms is recommended in National Policy Statement for Renewable Energy Infrastructure (EN-3) and the PPS22 Companion Guide as providing good practice that should be used to assess and rate noise from wind energy developments.

6.5.2 This report, prepared for the Department of Energy and Climate Change (DECC), provides technical guidance on the assessment of noise levels. It concludes that separate noise limits should be applied for day time and night time and that absolute noise limits should relate to the cumulative effect of wind turbines above background.

6.5.3 The PPS22 Companion Guide considers that there is no evidence that ground transmitted low frequency noise is at a sufficient level to be harmful to human health.

6.5.4 The recommended minimum separation distances from dwellings (see WT6 below) would assist in minimising noise effects of any wind turbines subject to consideration of local circumstances.

WT5 - Noise

Noise levels from wind turbines will be assessed and limited in accordance with the recommendations of the report ETSU-R-97 "The Assessment and Rating of Noise from Wind Farms" or any recognised successor to that document.

6.6 Amplitude Modulation

6.6.1 Amplitude Modulation refers to the thump or swish noise made by the blades of the wind turbine. There is currently no requirement in ETSU-R-97 to include any correction for amplitude modulation although further research in this area has been recommended.

6.6.2 Department of Energy and Climate Change guidance ([7]) states that current methods used in practice to implement the ETSU-R-97 guidelines will continue to apply until supplementary best practice guidance is published.

6.7 Separation distances from residential dwellings

6.7.1 Separation distances may be necessary to provide a sufficient distance between wind turbines and residential dwellings in order that the effects of visual intrusion, noise and shadow flicker are kept with acceptable levels.

6.7.2 There are no nationally prescribed minimum separation distances between wind turbines and existing developments. Previous guidance in PPS22 stated that plans may include criteria that set out the minimum separation distances between different types of renewable energy projects and existing developments.

6.7.3 The PPS22 Companion Guide refers to a fall over distance (i.e the height of the turbine to the tip of the blade) plus 10% that is often used as separation distance between wind turbines and occupied buildings on safety grounds.

6.7.4 Core Strategy Policy CS20 indicates that wind turbines and other low carbon energy generating developments will be supported where issues including the effects on the built environment, public and residential amenity, including noise intrusion are addressed.

6.7.5 A Private Members Bill is currently going through parliament which aims to introduce a range of separation distances ranging from 1-3km for wind turbines of height 25-150m or more. However, this is at an early stage in the process.

6.7.6 This may result in separation distances between wind turbines and residential premises becoming part of national planning law or policy, but in the absence of such national guidance this supplementary planning document provides local guidance on these matters.

6.7.7 Local Government Improvement and Development (formerly the IDeA) recommends a setback distance of at least 600-800m from residential properties for large wind turbines which may be reduced for smaller projects. Other land uses, including non-residential buildings and agriculture, can still be accommodated in this zone.

6.7.8 The Landscape Sensitivity and Capacity study commissioned by the Council identifies the magnitude of visual impact of wind turbines according to their height and distance from the viewer (see Appendix 2). The study recommends that wind turbines are unlikely to be acceptable within the "dominant" zone where turbines are likely to have the most visual impact.

6.7.9 In the light of the above a sliding scale of separation distances ranging from 320m for small turbines (of up to 50m height) to 800m for large turbines (of 100m or more) and 920m for any larger scale wind turbines (of 131m or more) is recommended in Rutland to the nearest residential dwellings in order to preserve the residential amenity of the residents of those properties and to minimise any impact of noise and shadow flicker.

6.7.10 The actual separation distances in WT6 below will be determined by the height of the turbine within the range shown (i.e. the greater the height of the turbine the greater the separation distance that will be required).

6.7.11 It is recognised that some flexibility in the recommended separation distances may be needed in to reflect the size and number of turbines, orientation of views and the local effects of trees, other buildings and topography as well as other issues such as noise safety, shadow flicker and impacts on landscape or heritage assets.

WT6 – Separation distances from residential dwellings

The following minimum overall separation distances are recommended between the wind turbines of different heights and residential dwellings in order to preserve residential amenity in accordance with Core Strategy CS20:

Height of turbine (overall height to tip of blade)	**Up to 50m**	**50-70m**	**71-85m**	**86-99m**	**100-130m**	**131-c.150m**
Recommended separation distance	**320m or more**	**480m or more**	**575m or more**	**680m or more**	**800m or more**	**920m or more**

This recommended separation distances above may be varied according to local circumstances such as the size and number of turbines, orientation of views, the local effects of trees, other buildings and topography, noise safety, shadow flicker and impacts on landscape or heritage assets

6.8 Footpaths

6.8.1 There is no statutory separation between a wind turbine and public right of way. The PPS22 Companion guide states that fall over distance is often considered an acceptable separation and that the minimum distance is often taken to be that turbine blades should not be permitted to oversail a public right of way.

WT7 – Separation distances from public footpaths

A minimum separation distance is recommended between wind turbines and public footpaths of fall over distance (i.e. the height of the turbine to the tip of the blade). Turbine blades should not be allowed to oversail a public right of way.

6.9 Bridleways

6.9.1 There is no statutory separation between a wind turbine and bridleway. The PPS22 Companion Guide refers to the 200 metre exclusion zone around bridle paths to avoid frightening horses suggested by the British Horse Society but that some negotiation should be undertaken if this is difficult to achieve.

6.9.2 The British Horse Society has subsequently revised its guidance ([1]) to recommend a separation distance of four times the overall height of any wind turbine from a National Trails and Ride UK route, with a distance of three times overall height from all other routes, including roads, and a minimum 200m where this would be acceptable.

6.9.3 There are not at present any National Trail or Ride UK routes in Rutland and it is recommended that the minimum separation distance from public bridleways should be 200m minimum as proposed by the British Horse Society with the aim of achieving a distance of three times the overall height of any turbine.

WT8 - Separation distances from public bridleways

A minimum separation distance of three times overall height of any wind turbine (i.e. the height of the turbine to the tip of the blade) and public bridleways is recommended as a starting point, with a minimum separation distance of 200m recommended where this would be difficult to achieve, subject to negotiation. .

6.10 Power lines, Roads and Railways

6.10.1 The PPS22 Companion Guide recommends a set-back from roads and railways of at least fall over distance to achieve maximum safety but that applicants are advised to consult at an early stage with the Highways Agency for trunk roads and the local highways authority for all other publicly maintained highways.

6.10.2 The Highways Agency ([10]) recommends a setback distance from the nearest highway boundary equal to the height of the turbine plus 10 % for micro and small turbines and commercial turbines should be set back a distance equal to their height plus 50m.

6.10.3 The only trunk road passing through Rutland is the A1 in the east of the County. Early liaison with the Highways Agency is recommended regarding any separation distances that may be required for any proposed wind turbines in proximity of the A1.

6.10.4 Consultation with Network Rail is also recommended regarding any proposals in proximity of railway lines and facilities.

6.10.5 The PPS22 Companion Guide recommends that wind turbines should be separated from overhead power lines in accordance with the Electricity Council Standard 44-8 “Overhead Line Clearances”.

WT9 - Separation distances from power lines, road and railways

A minimum separation distance is recommended for commercial scale wind turbines from trunk roads of their height (i.e. the height of the turbine to the tip of the blade) plus 50m in accordance with Highway Agency guidance.

A minimum separation distance of at least fall over distance (i.e. the height of the turbine to the tip of the blade) is recommended from other roads and railways.

6.11 Nature conservation

6.11.1 The National Policy Statement for Renewable Energy Infrastructure (EN-3) indicates that there is potential for the rotating blades of a wind turbine to strike birds and adversely affect bats resulting in injury and death. It recommends that wind turbines should be laid out to minimise impacts on birds or bats where a significant risk has been identified.

6.11.2 The PPS22 Companion Guide advises that, apart from the movement of turbine blades, the development of wind turbines warrants no different approach in terms of ecological considerations from any other development.

6.11.3 Core Strategy Policy CS20 indicates that wind turbines and other low carbon energy generating developments will be supported where issues including the effects on the natural environment including any potential impacts on the internationally designated conservation area of Rutland Water are addressed.

6.11.4 Core Strategy Policies CS21 and CS24 set out the approach towards nature conservation and Rutland Water and proposals for wind turbines will be considered in accordance with these policies.

6.11.5 Rutland Water is a site of Special Scientific Interest, a Ramsar site and Special Protection Area with national and international importance for passage and breeding waterfowl. There are also a number of other SSSIs in Rutland.

6.11.6 The potential impacts of wind turbines impacts on designated sites of international, national and local importance for wildlife and biodiversity, within and outside of Rutland, and protected species will need to be taken into account in accordance with national and local policy.

6.11.7 Impacts on Rutland Water have the potential to be a major constraint on wind turbine developments in Rutland and the form and siting of wind turbines will need to carefully consider to avoid any impacts, e.g. bird strike and disturbance.

6.11.8 Any application that may have the potential to impact on a European site such as Rutland Water would require a Habitat Regulations Assessment (HRA) as per Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (known as the Habitats Regulations).

6.11.9 Natural England recommend that impacts on designated sites should be assessed on a case by case basis, drawing upon appropriate surveys, but that there should be a 50m setback distance from blade tip height to the nearest ecological feature (e.g. trees and hedgerows) to avoid disturbance to bat populations.

6.11.10 Further advice on the impact of wind turbines on birds, bats and other wildlife is available on the Natural England website. A document providing more detailed guidance on wind farm development and nature conservation has been produced by WWF, English Nature, RSPB and British Wind Energy Association ([21]).

WT10 – The natural environment

Wind turbine proposals will be expected to protect, maintain and enhance the natural environment and provide an appropriate level of protection to legally protected sites and species in accordance with Core Strategy Policy CS21 and other national and local guidance.Wind turbine proposals will be expected to respect and not adversely affect the conservation objectives of the Rutland Water internationally designated site of nature conservation in accordance with Core Strategy Policy CS24 and other national and local guidance.

A minimum setback distance of 50m from wind turbines to the nearest trees and hedgerows is recommended in order to minimise risk to bat populations.

6.12 The historic and cultural environment

6.12.1 The Overarching Statement for Energy Infrastructure (EN-1) advises that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment and that the impacts on designated and non-designated assets will need to be considered.

6.12.2 The National Policy Statement for Renewable Energy Infrastructure (EN-3) advises that onshore wind turbines are generally consented on the basis that they will be time limited in operation which should be taken into account in considering any indirect effect on the historic environment.

6.12.3 The PPS22 Companion Guide advises that special care will be needed if proposed sites for wind turbines are near listed buildings or conservation areas.

6.12.4 Core Strategy Policy CS22 indicates that wind turbines and other low carbon energy generating will be supported where issues including the effects on the cultural and built environment are addressed.

6.12.5 The policy also indicates that all developments, projects and activities will be expected to protect and where possible enhance historic assets and their settings, maintain local distinctiveness and the character of identified features.

6.12.6 Wind turbines have potential to impact on the setting of, and long views and vistas to and from historic assets, as well as direct impacts on the historic/archaeological fabric, the potential for buried archaeology and effects on landscape amenity.

6.12.7 English Heritage recommend that a Zone of Theoretical Visibility (ZTV) be produced to assess the impact of topography, trees and buildings on lines of sight which should form part of the environmental statement to accompany a planning application, in line with appropriate guidance.

6.12.8 The findings of Leicestershire, Leicester and Rutland Historic Landscape Characterisation Project ([13]) should be taken into account.

6.12.9 Further guidance on wind energy and the historic environment is contained in a document issued by English Heritage([8]).

WT11 – The historic and cultural environment

Wind turbine proposals will be expected to protect and where possible enhance historic assets and their settings, maintain local distinctiveness and the character of identified features in accordance with Core Strategy Policy CS22 and other national and local guidance.

6.13 Economy and tourism

6.13.1 Tourism represents an important part of Rutland's economy and it will be important to ensure that wind turbines do not detract from this, either in terms of wider impacts on landscape and visual quality and more direct impacts on local tourist facilities and attractions.

6.13.2 Developers should therefore ensure that any impact on the local economy is minimised or mitigated and that it is explicitly shown how the minimisation or mitigation is to be implemented.

6.13.3 Consideration should be given to employing local labour and using locally sourced and/or recycled materials, in particular for the construction of bases, access roads and other ancillary structures.

6.14 Grid Connection

6.14.1 The Overarching Statement for Energy Infrastructure (EN-1) advises that it is for the applicant to ensure that there will be necessary infrastructure and capacity within an existing or planned transmission or distribution network to accommodate the electricity generated in liaison with the National Grid.

6.14.2 The PPS22 Companion Guide states that where works required to connect the wind farm to the local electricity distribution network are not permitted under the General Development Order it will be necessary to submit a separate planning application or in the case of an overhead line an application for consent by the Secretary of State for Trade and Industry.

6.14.3 The document recommends that electricity companies are encouraged to co-operate with the local planning authorities during consultation about the application to construct the wind farm in order that any preference or need for overhead or underground connection may be demonstrated.

6.14.4 It recommends that developers provide information on the most likely route and method for the grid connection to the wind turbine(s) with the planning application and as part of any Environmental Impact Assessment. The connection to the grid forms an intrinsic part of the project and both should be considered together.

WT12 – Grid connection

Developers must provide information on the proposed route and method for the grid connection to the wind farm with the planning application and as part of any Environmental Impact Assessment. The connection to the grid forms an intrinsic part of the project and both should be considered together.

6.15 Air traffic and radar

6.15.1 Wind turbines may represent a risk of collision with low flying aircraft and interfere with the proper operation of radar. Developments within a specified safeguarding zone of major airports and aerodromes are subject to mandatory consultation with the Civil Aviation Authority and/or the Ministry of Defence. Wind turbine developments outside these safeguarding zones can also impact upon radar and consequently flight operations and safety.

6.15.2 National Air Traffic Services (NATS) is a statutory consultee on all wind turbine applications irrespective of their size and location.

6.15.3 Parts of Rutland lie within safeguarded areas around military airfields at RAF Cottesmore in Rutland and RAF Wittering to the south east of Rutland. These areas are subject to mandatory consultation with Ministry of Defence (MoD). The MoD also wishes to be consulted on proposals for wind turbines 11m high or more and/or with a rotor diameter of 2m or more outside these areas.

6.15.4 The Overarching Statement for Energy Infrastructure (EN-1) advises that an assessment of potential effects on civil or military aviation and/or other defence assets should be set out in the environmental statement (see paragraphs 5.1 to 5.7 above) and the applicant should consult the MoD, CAA, NATS and any aerodrome likely to be affected.

6.15.5 Further information about the relevant consultation procedures with the Civil Aviation Authority and Ministry of Defence that may be required can be found in the PPS22 Companion Guide;on the Renewable UK website ([19]), the CAA website ([2]) and on the MoD Safeguarding website([15]).

WT13 – Air traffic and radar

Wind turbine developments within safeguarded areas around military airfields will be subject to mandatory consultation with the Civil Aviation Authority and/or the Ministry of Defence. Developers should address any potential impacts on air traffic and radar wherever possible before planning applications are submitted.

6.16 Broadcasting and telecommunications

6.16.1 Wind turbines can potentially interfere with electromagnetic transmissions by blocking or deflecting line of sight radio or microwave links or by 'scattering' of television or radio and other telecommunication signals.

6.16.2 The National Planning Policy Framework advises that local planning authorities should ensure that they have considered the possibility of the construction of new buildings or other structures interfering with broadcast and telecommunications services.

6.16.3 The PPS22 Companion Guide advises that problems with line of sight communications can often be avoided by resiting of turbines or rerouting of the signal at the developer's expense. Scattering of the signal can generally be alleviated by a local repeater station or cable connection.

6.16.4 Applicants are advised consult with electronic communication providers at an early stage and to contact OFCOM who will identify any radio installations relevant to the wind turbine site and pass on any enquiry to any interested parties.

6.16.5 Further information is available in the PPS22 Companion Guide and on the OFCOM website.

6.17 Form and siting

6.17.1 The Landscape Sensitivity and Capacity Study ([12]) commissioned by the Council recommends guidance on the form and siting of wind turbines as outlined below.

WT14 – Form and siting

a) Single turbines should where possible visually relate to existing agricultural or industrial buildings
b) Layouts for turbine groups in the open countryside should relate to the landform and field pattern of each landscape character area. In Rutland this will typically involve clusters rather than linear or grid arrangements.
c) Turbines should be arranged to minimise the effects of overlapping blades (stacking) from sensitive locations or receptors
d) Impacts on sensitive skylines should be minimised and medium and large turbines should be set back from plateau edges
e) Turbines should be located to avoid visual clutter with existing vertical elements in the landscapes, such as pylons/overhead wires and existing turbine groups.
f) Views to or from existing landmark or historic features, e.g. church spires, vistas or panoramas associated with parks and gardens and over long distances which could affect the setting of historic settlements and landmark buildings should be carefully considered to avoid visual conflict.

6.18 Health and Safety

6.18.1 Other guidance contained in this document, such as that on separation distances from residential dwellings, public footpaths and bridleways, roads and railways is intended to ensure that there are no adverse impacts on human health or safety.

6.18.2 The PPS22 Companion Guide advises that in terms of safety requirements the fall over distance (i.e. the height of the turbine to the tip of the blade) plus 10% is often used as a safe separation distance.

6.19 Mitigation

6.19.1 The Landscape Sensitivity and Capacity Study ([12]) commissioned by the Council recommends a number of mitigation measures that can be taken as outlined below.

WT15 - Mitigation

a) All turbines within a group should be of the same appearance and size to create visual harmony. This should apply to ‘extensions’ 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 with a matt finish 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 appropriate form. It is accepted 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 landscape planting and management proposals within the application area should be included as part of the proposed schemes to mitigate landscape and visual impacts. 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

6.20 Decommissioning and reinstating land

6.20.1 Conditions may be applied to planning consents for wind turbines developments requiring the land to be restored to its former condition when the operation of the wind turbines has ceased. A decommissioning scheme should be submitted with the planning application.

6.20.2 Full restoration may require the removal of turbines and their bases, ancillary structures and restoration of appropriate vegetation. Operators and landowners will be required to ensure that sufficient finance is set aside to enable them to meet full restoration obligations, for example through a legally binding bond.

7. References

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8. English Heritage. Wind Energy and the Historic Environment. (October 2005)
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12. Landscape Partnership. Landscape Sensitivity and Capacity Study – Wind Turbines. Report to Rutland County Council (September 2012, updated October 2012)
13. Leicestershire County Council. Leicestershire, Leicester and Rutland Historic Landscape Characterisation Project (2010)
14. Lincolnshire County Council. Wind Turbine Position Statement. (May 2010).
15. Ministry of Defence. MOD Safeguarding (website link).
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17. Office of the Deputy Prime Minister. Planning for Renewable Energy. A companion guide to PPS22 (2004)

18. Office of the Deputy Prime Minister. Renewable Energy. Planning Policy Statement 22 (2004) (now replaced by (4) above).

19. Renewable UK. Guidance on aviation.

20. Rutland County Council. Countryside Design Guidance (June 2004)

21. WWF, English Nature, RSPB, British Wind Energy Association. Wind farm development and Nature Conservation (March 2001).

Appendix 1

Landscape Capacity by Landscape Character Type

a) Small turbines (up to 50m high)

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+)**
Map number	Map 1	Map 2	Map 3	Map 4	Map 5
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	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 by Landscape Character Type

b) Medium turbines (50-99m high)

Landscape Character Type	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+)**
Map number	Map 6	Map 7	Map 8	Map 9	Map 10
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 by Landscape Character Type

c) Large Turbines (100m+ high)

Landscape Character Type	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+)**
Map number	Map 11	Map 12	Map 13	Map 14	Map 15
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

Appendix 2

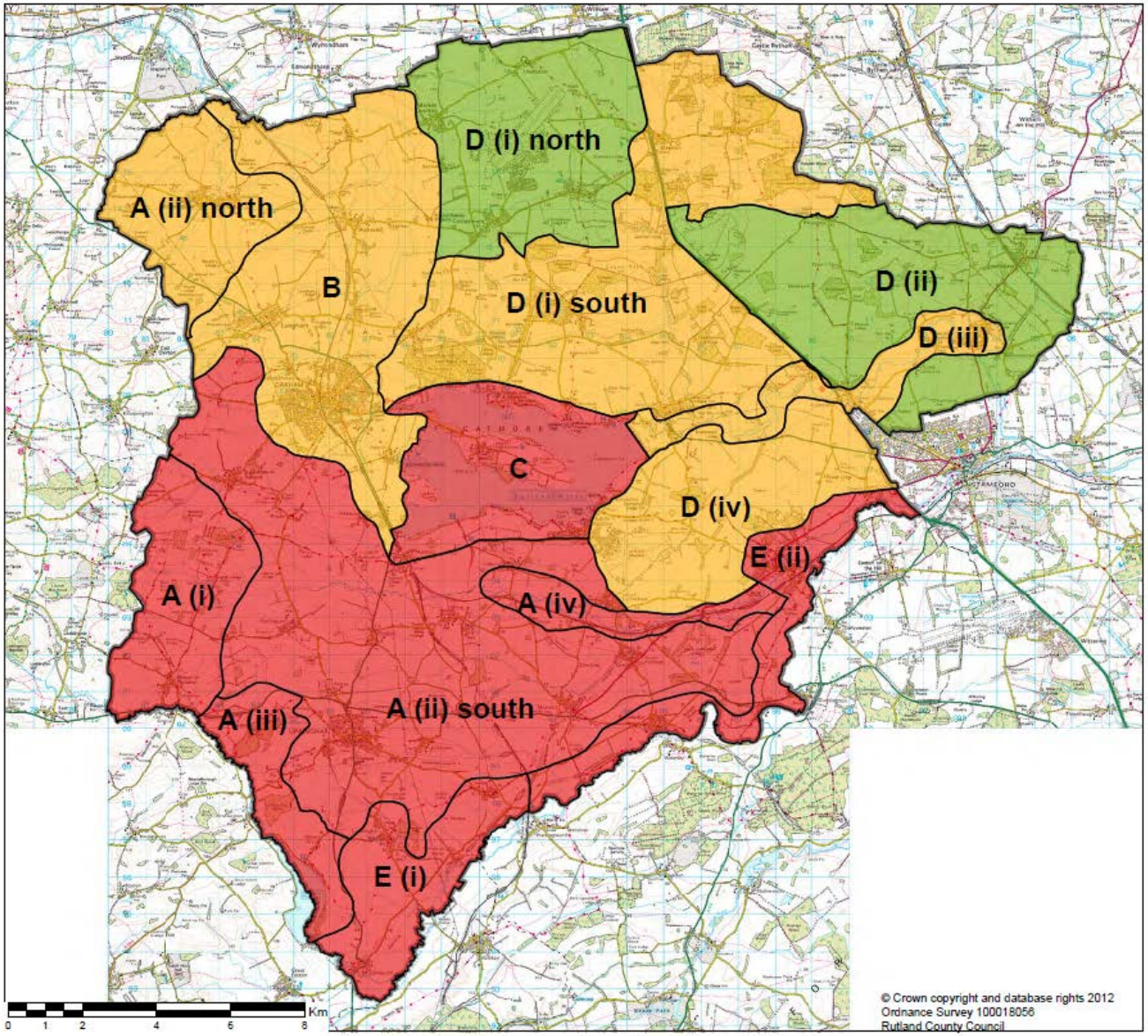
Visual Impact Guidelines for Different Wind Turbine Heights

Visual Impacts of Wind 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

Note: The distances set out above are a guide and will need to be tested for a specific proposal on a case by case basis

Map 1 Small sized turbines - Single Turbine



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

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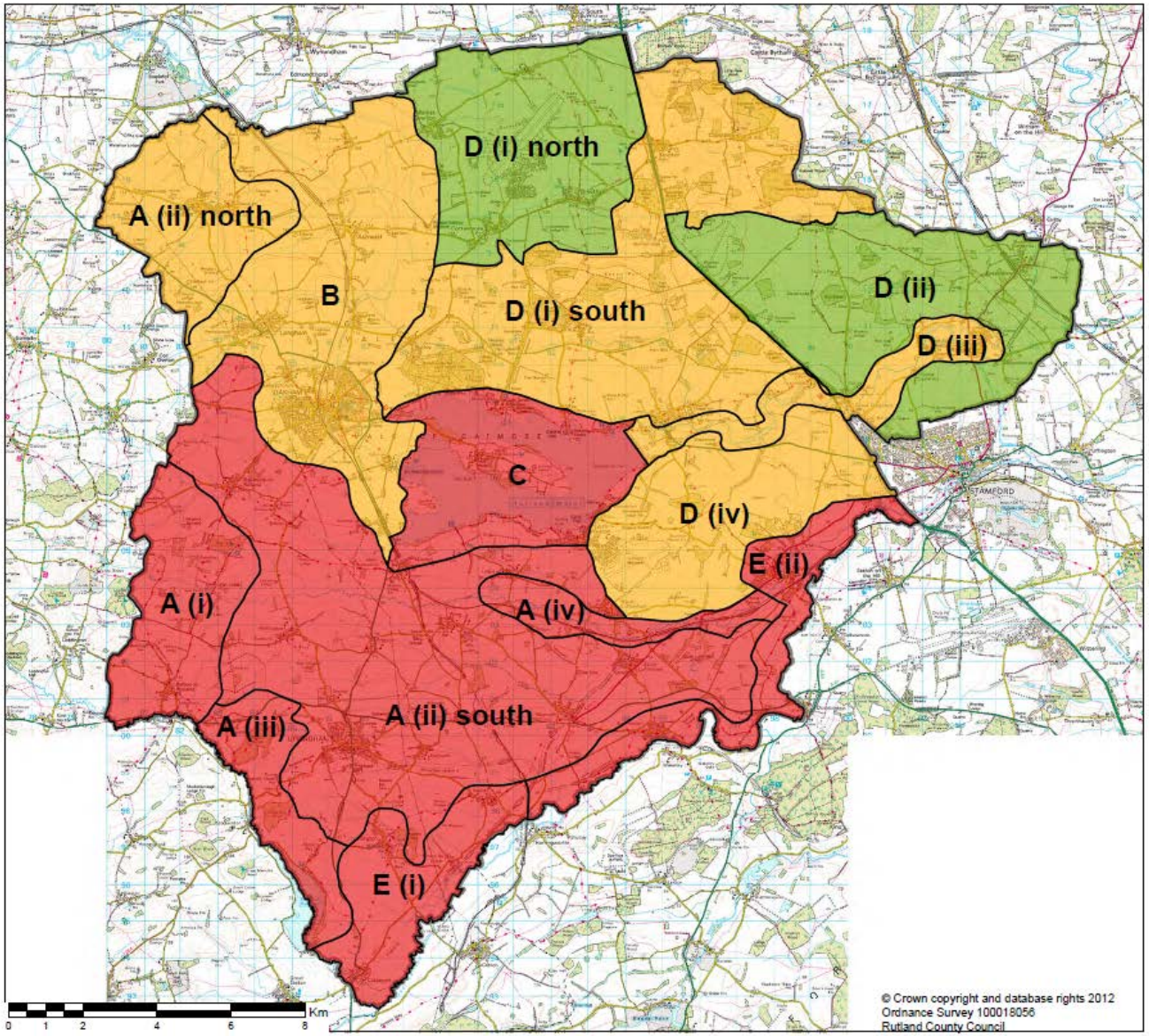
Map 2 Small sized turbines – Small Group (2-5 turbines)



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

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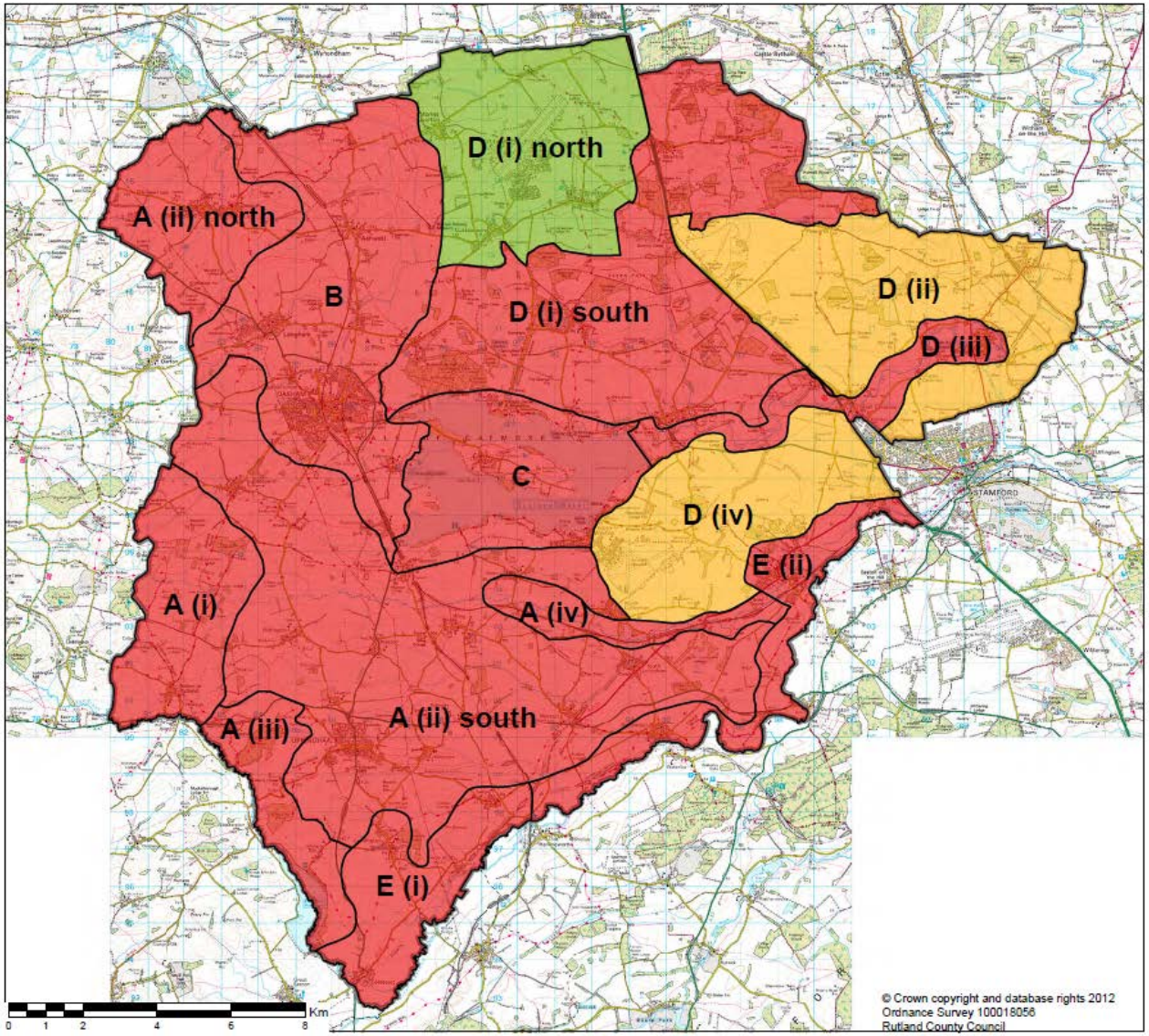
Map 3 Small sized turbines – Small-medium Group (6-11 turbines)



Key

- High Capacity
- Moderate Capacity
- Low Capacity

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 06A

Scale: 1:100,000

Date: September 2012

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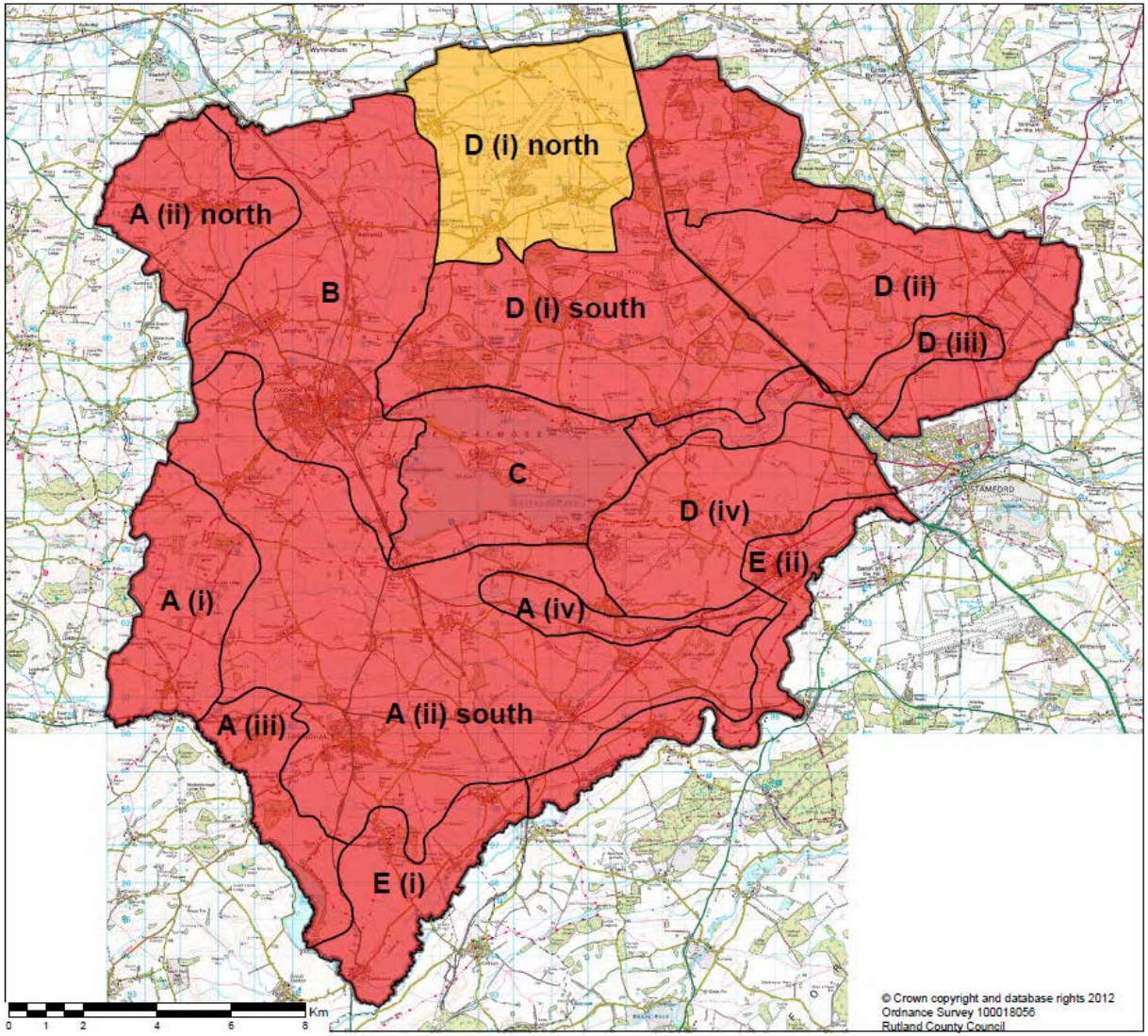
Map 4. Small sized turbines – Medium Group (12-16 turbines)



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

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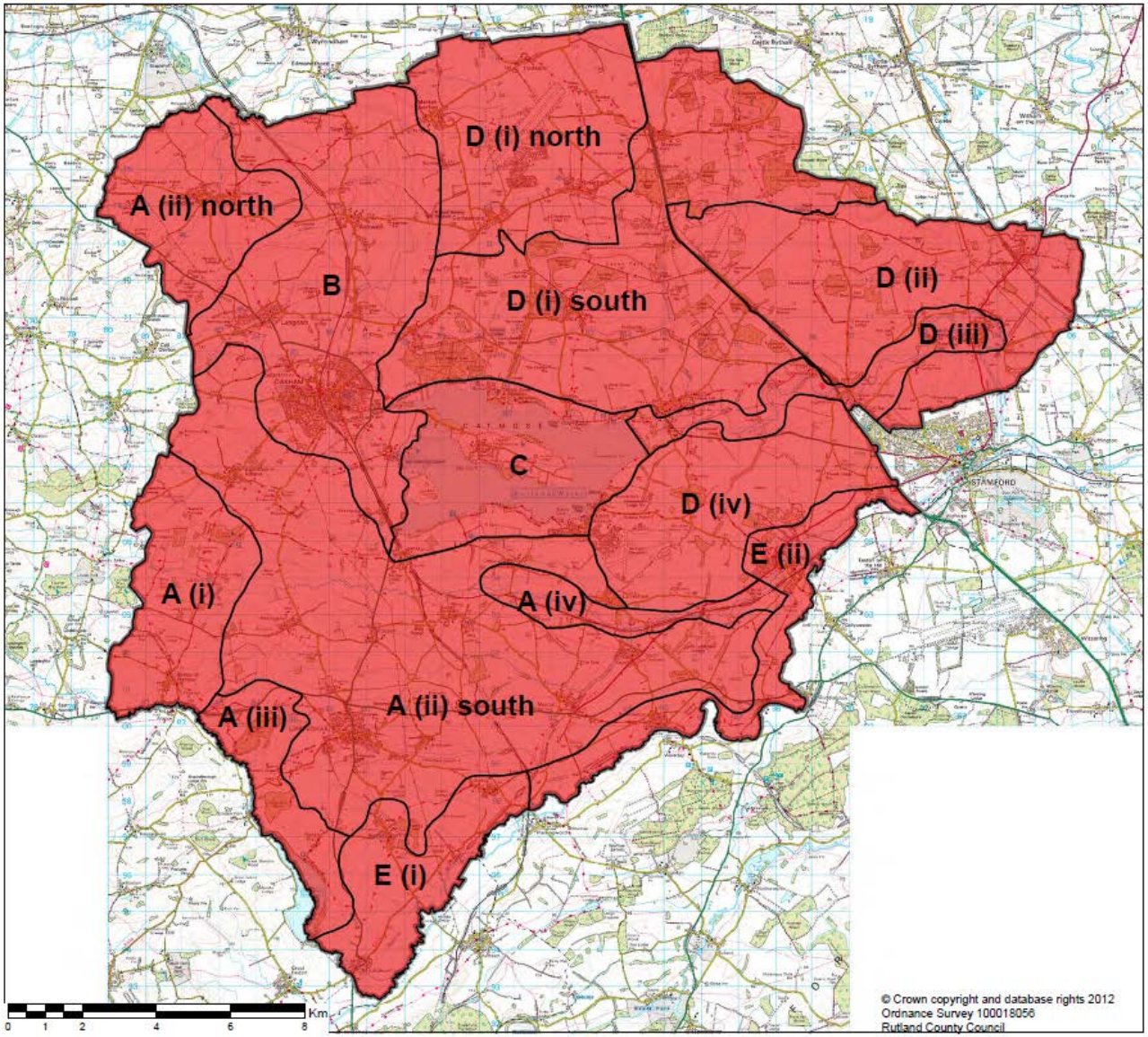
Map 5. Small sized turbines – Large scale Group (17+ turbines)



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

Scale: 1:100,000

Date: September 2012

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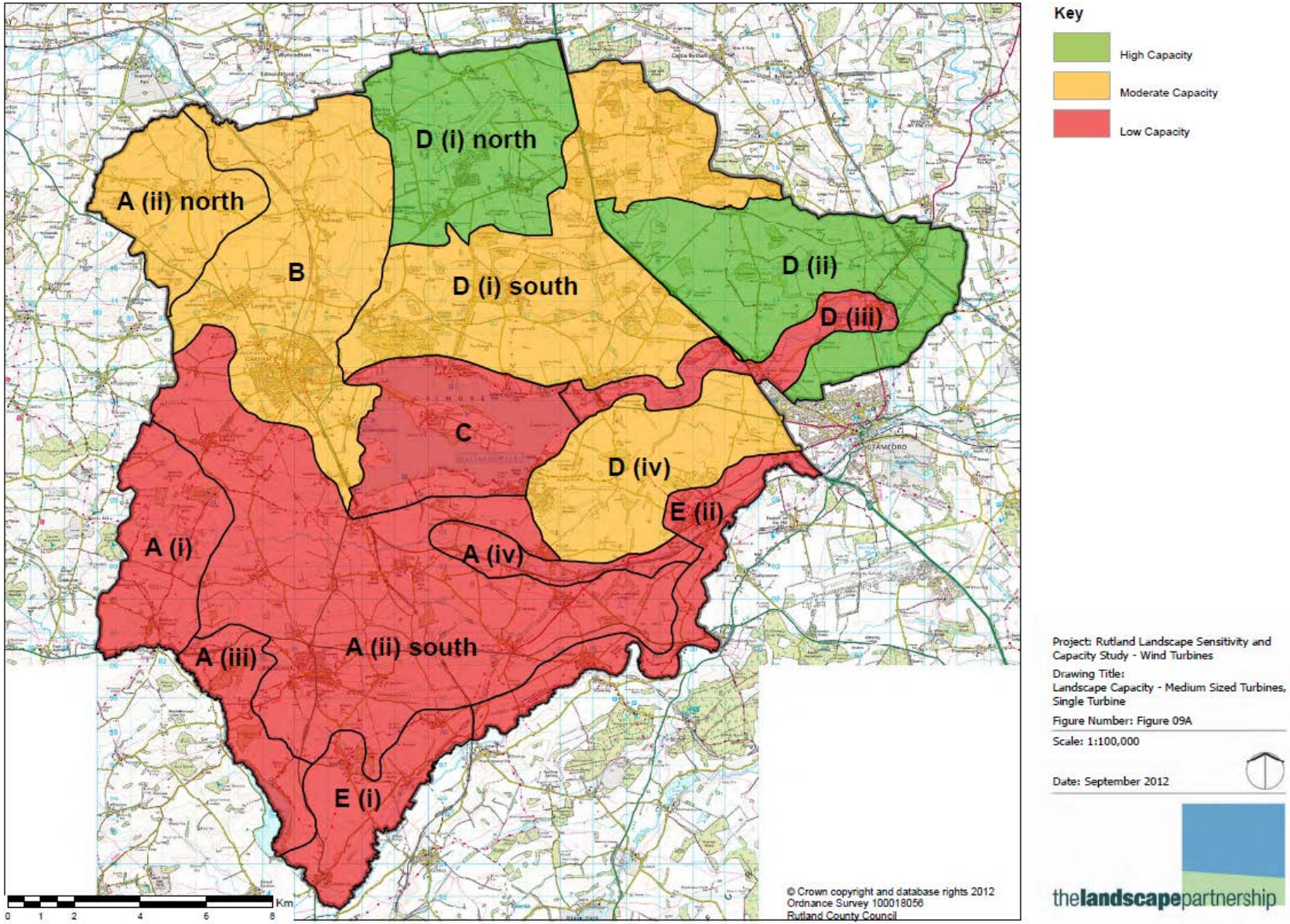
Map 6. Medium sized turbines – Single Turbine



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

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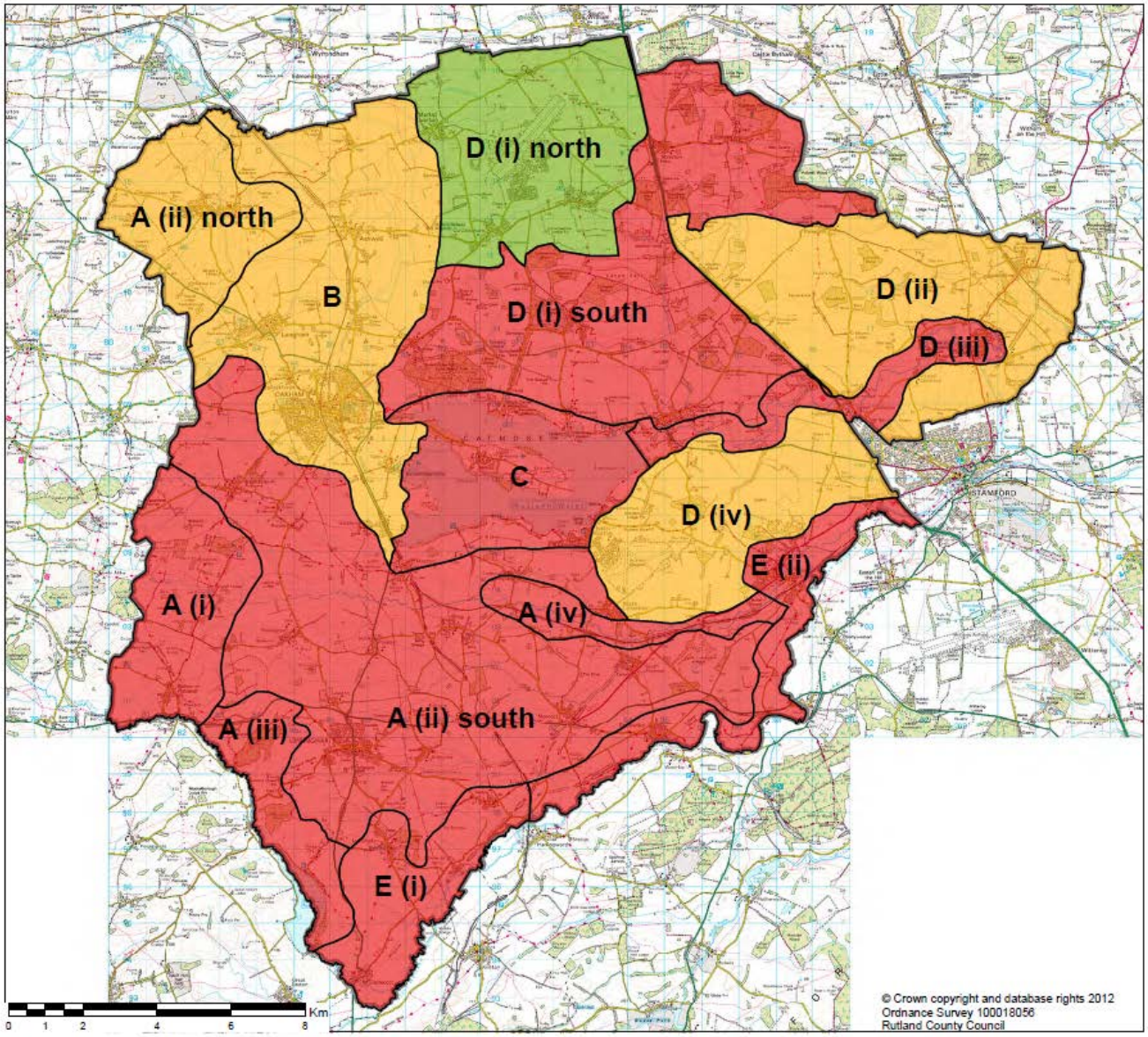
Map 7. Medium sized turbines – Small Group (2-5 turbines)



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

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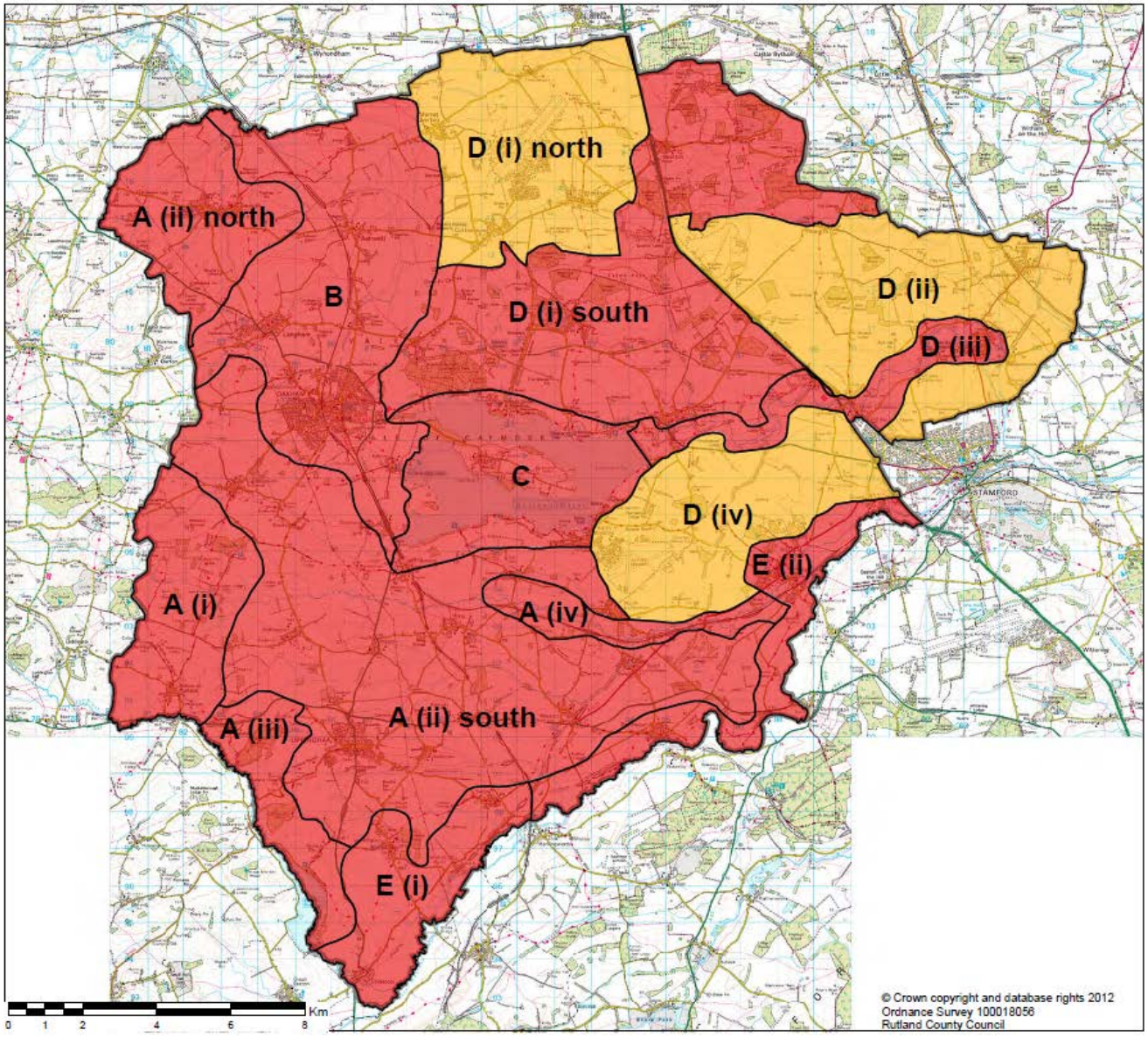
Map 8. Medium sized turbines – Small-medium Group (6-11 turbines)



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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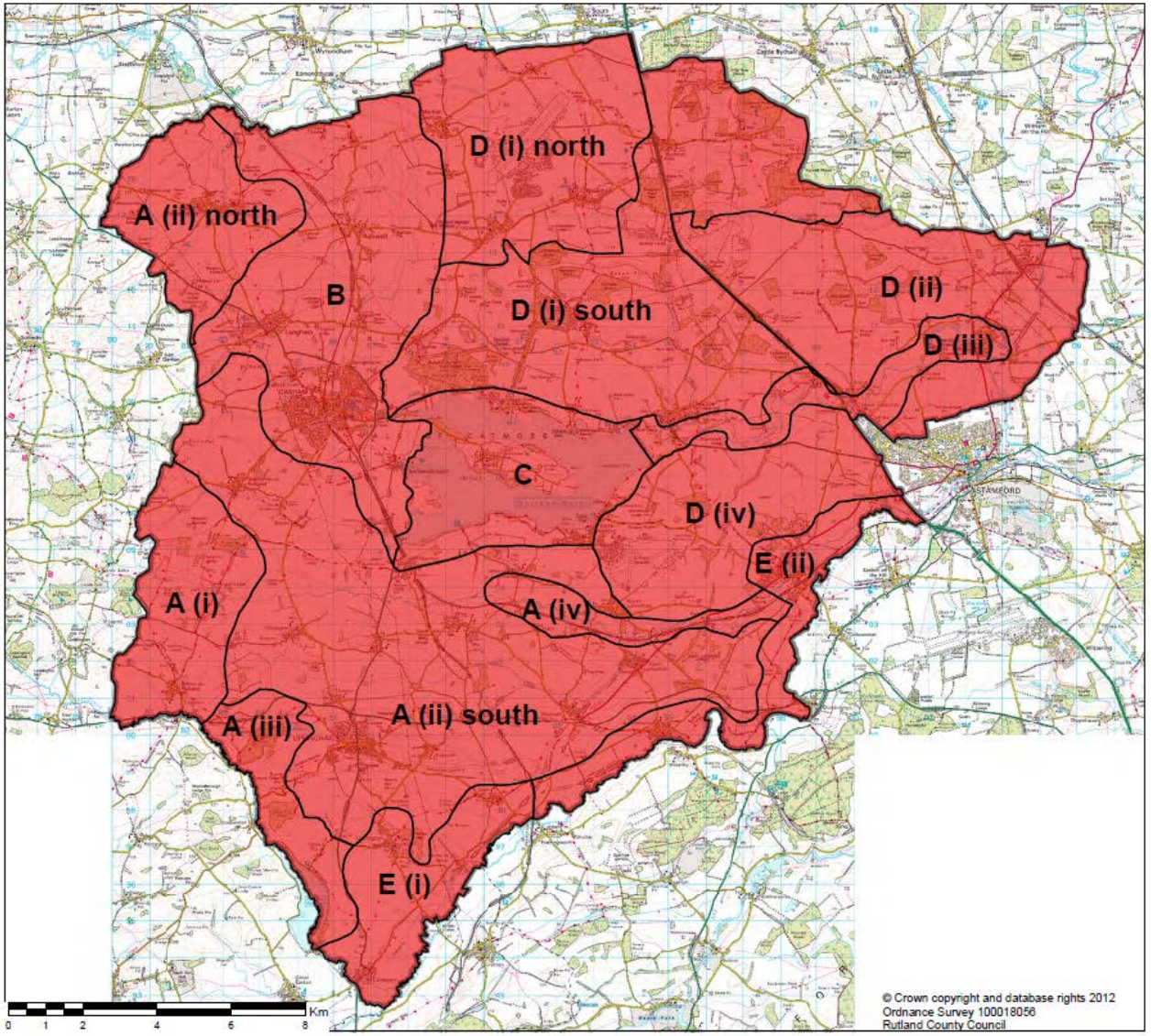
Map 9. Medium turbines – Medium scale group (12-16 turbines)



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

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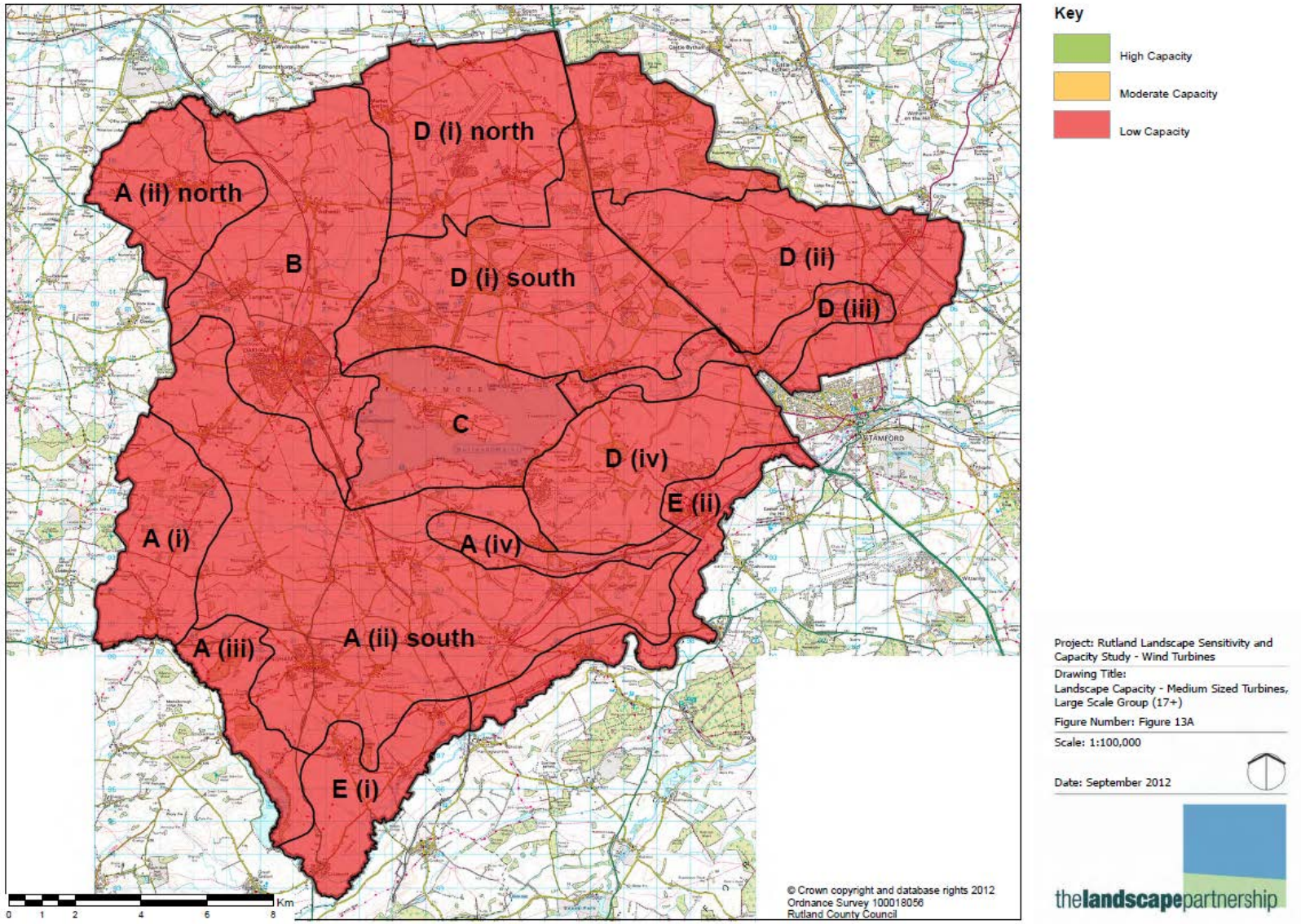
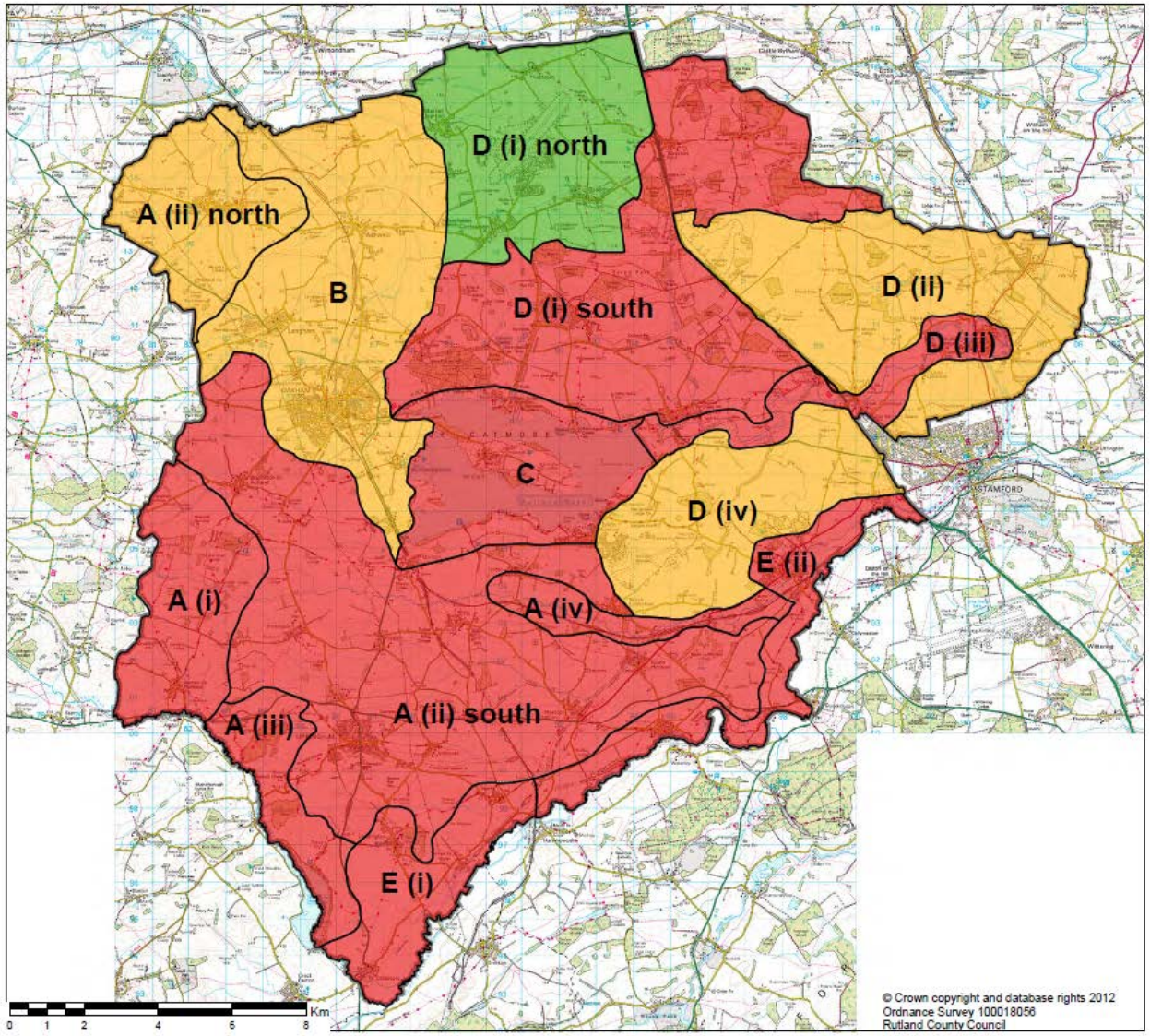
Map 10. Medium sized turbines – Large scale group (17+ turbines)



Map 11. Large sized turbines – Single Turbine



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

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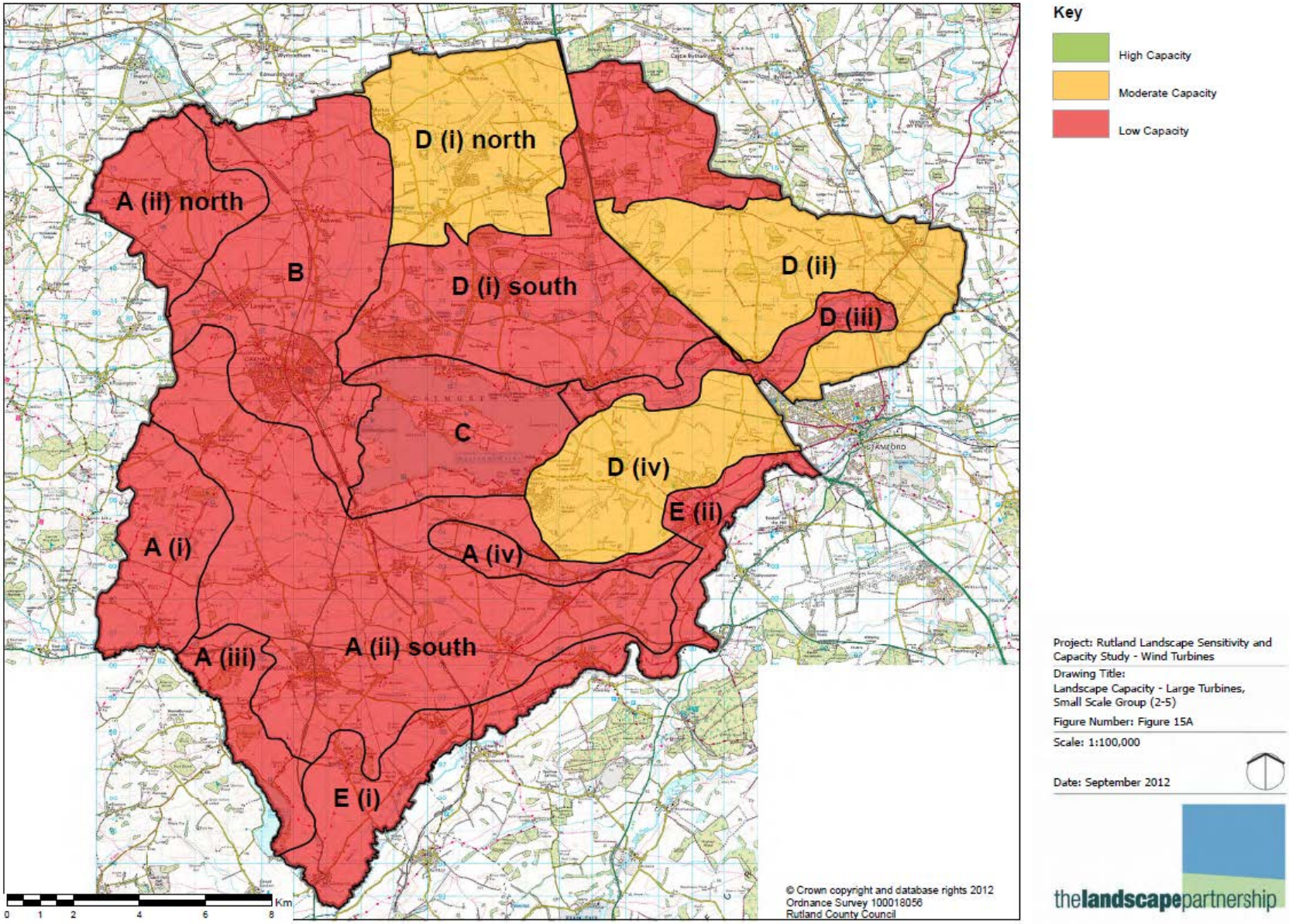
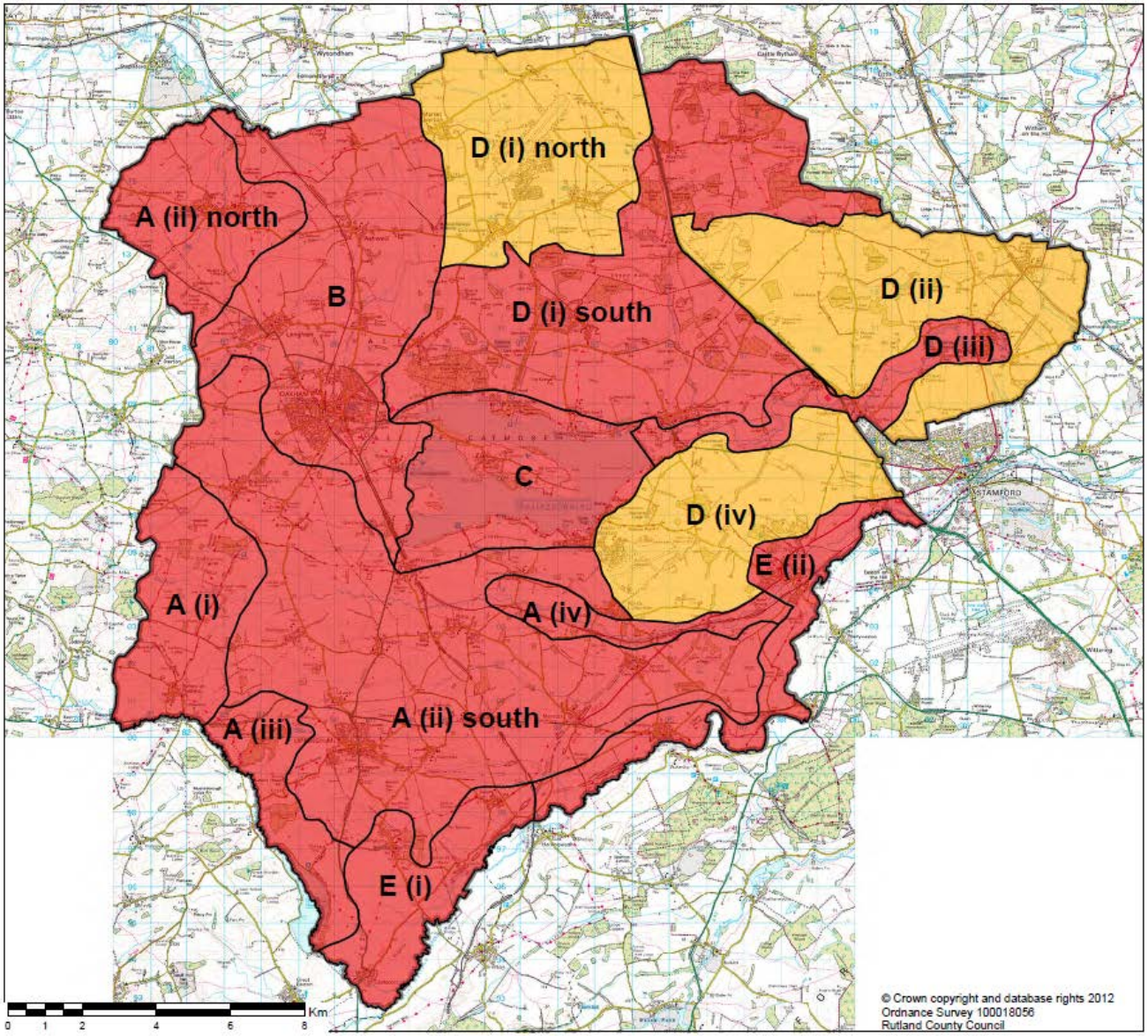
Map 12. Large sized turbines – Small Group (2-5 turbines)



Map 13. Large sized turbines – Small-medium Group (6-11 turbines)



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

Scale: 1:100,000

Date: September 2012

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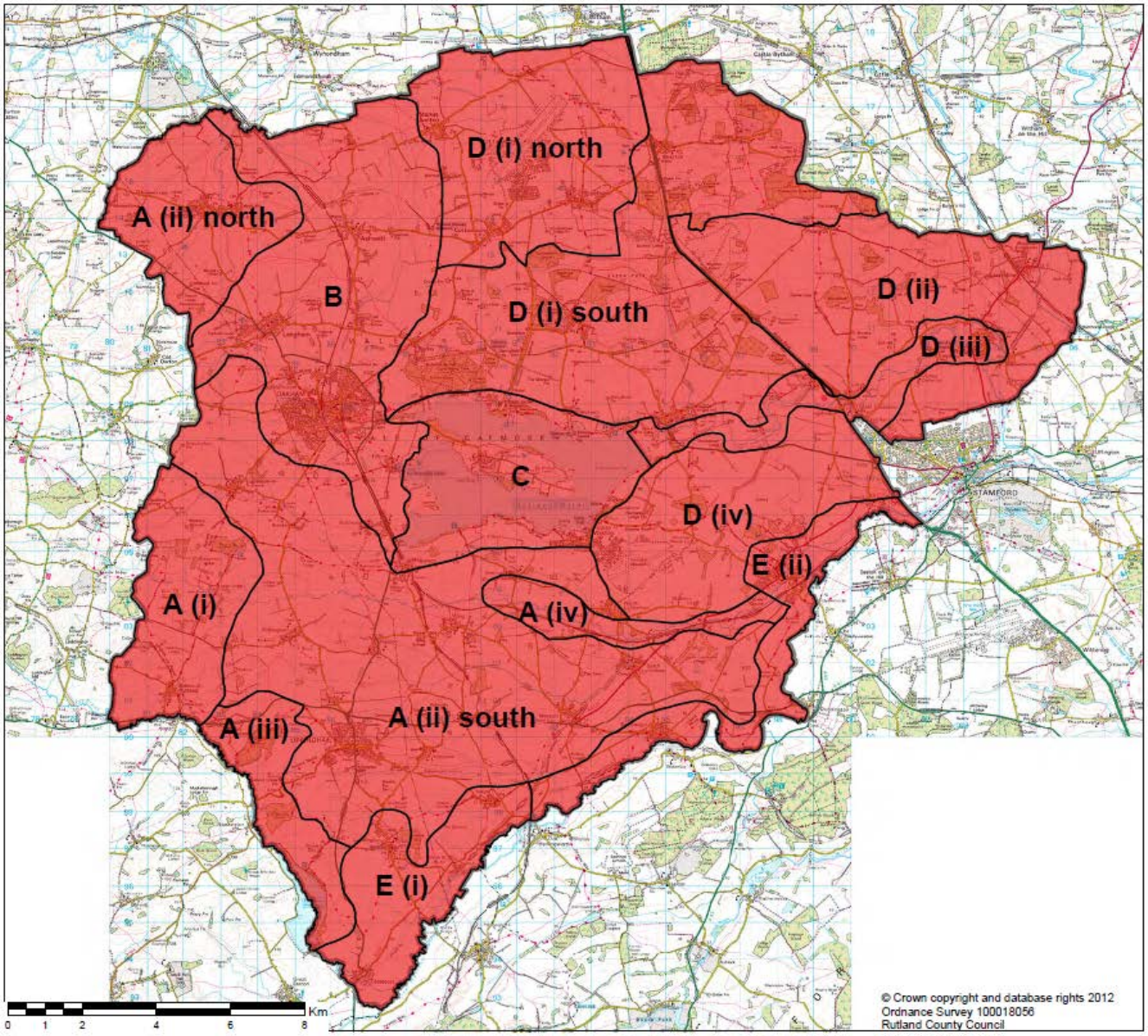
Map 14. Large sized turbines – Medium scale group (12-16 turbines)



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

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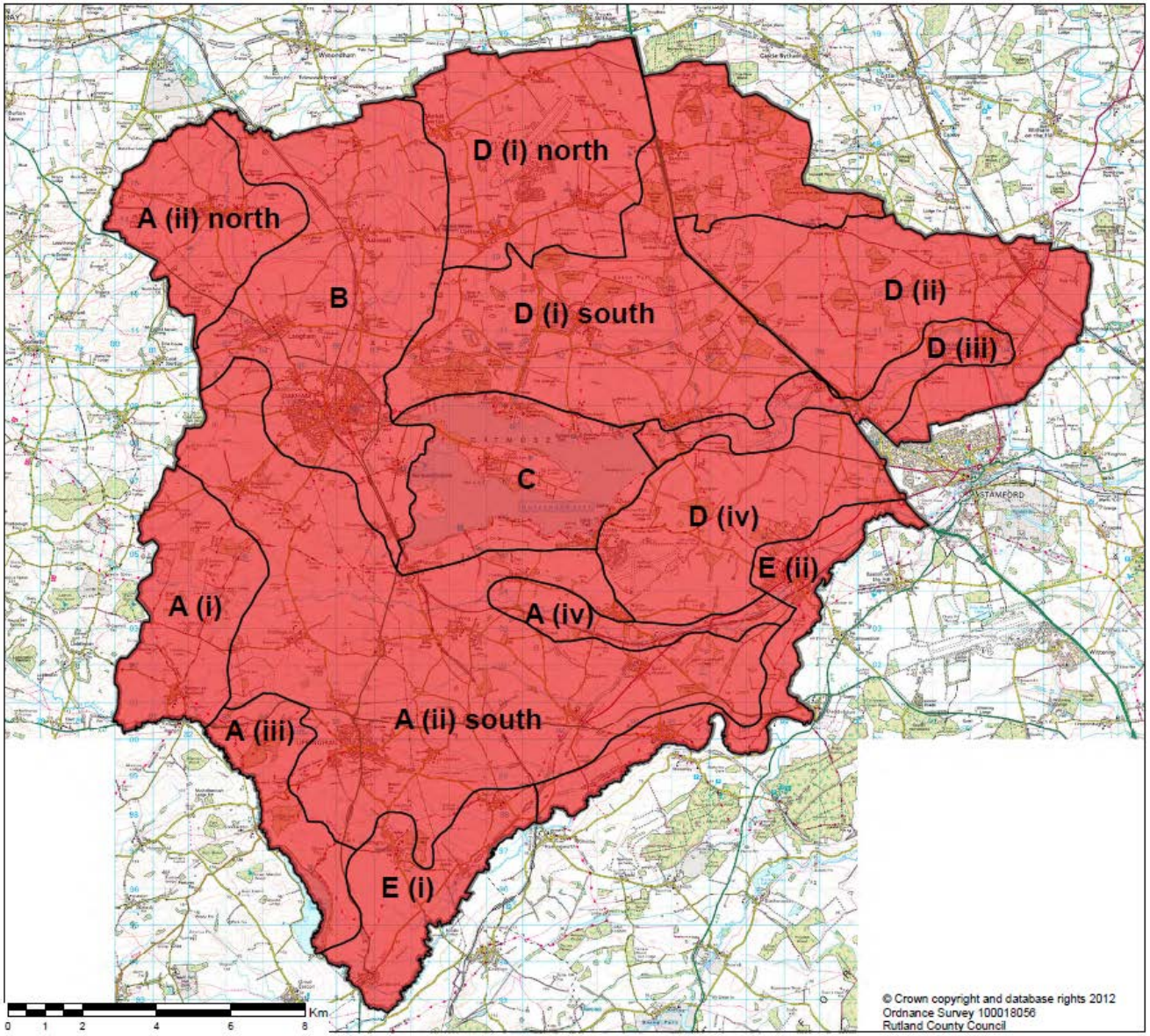
Map 15. Large sized turbines – Large scale group (17+ turbines)



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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