

Harrogate District Local Plan: Wind Energy Background Paper



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Wind Energy Background Paper

1 Introduction

- 1.1** This background paper has been produced to support the council's approach to planning for wind energy development in the emerging Harrogate District Local Plan.
- 1.2** Section 2 sets out the policy context provided by the National Planning Policy Framework (NPPF) and relevant National Policy Statements (NPSs). It details the ministerial statement on the development of wind turbines issued in June 2015, as well as national planning guidance set out in the Planning Practice Guidance (PPG).
- 1.3** Section 3 sets out the local and sub-regional evidence that has informed the council's approach and reflects on the suitability of using this as a basis for identifying suitable areas for wind energy development in the Local Plan.
- 1.4** Finally, section 4 details the emerging Local Plan approach to wind energy development as set out in policy CC3: Renewable and Low Carbon Energy.

2 Policy Context

2 Policy Context

- 2.1** This section provides a summary of the policy context relevant to the council's approach to planning for wind energy development.

National Planning Policy Framework

- 2.2** The National Planning Policy Framework (NPPF) sets out the government's planning policies for England. The NPPF must be taken into account in the preparation of Local Plans and is a material consideration when making planning decisions.
- 2.3** Paragraph 14 of the NPPF identifies that at the heart of the framework is a presumption in favour of sustainable development and that this should be seen as a golden thread running through both plan-making and decision-taking. Paragraph 15 explains that policies in Local Plans should follow the approach of the presumption in favour of sustainable development.
- 2.4** Paragraph 17 sets out 12 core planning principles that should underpin plan-making and decision-taking. One of the core principles deals with transitioning to a low carbon future in a changing climate. Included within this principle is encouragement for the use of renewable resources, for example, by the development of renewable energy.
- 2.5** Chapter 10 of the NPPF sets out national policy for meeting the challenge of climate change, flooding and coastal change; and within this, paragraph 97 is relevant to planning for renewable and low carbon energy. It states that:

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 (footnote);*
- *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 collocating potential heat customers and suppliers.*

- 2.6** If local planning authorities decide to identify suitable areas for wind energy development the footnote to the third bullet point states that, in assessing the likely impacts of such development, they should follow the approach set out in the National Policy Statement for Renewable Energy (read with the relevant sections of the Overarching National Policy Statement for Energy Infrastructure, including that on aviation impacts). It also states that where plans identify areas as being 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.

National Policy Statements

- 2.7** National Policy Statements (NPSs) set out policy for the development of nationally significant infrastructure. Nationally significant infrastructure proposals have a different consent regime and are determined by the Secretary of State, rather than local planning authorities, with relevant NPSs providing the primary basis for decisions.
- 2.8** In relation to onshore wind energy infrastructure, the NPS for Renewable Energy infrastructure (EN-3) (DECC, 2011) identifies that it and the Overarching NPS for Energy (EN-1) (DECC, 2011) cover proposals of over 50MW of generating capacity. EN-3 also identifies that, given current technologies, this is likely to be wind farms comprising fourteen or more turbines.
- 2.9** While developments with generating capacity of less than 50MW do not fall within the scope of the NPSs, the footnote to NPPF para 97 bullet point 3 requires planning authorities looking to identify suitable areas for wind energy development to follow the approach set out in these NPSs, including that on aviation impacts, when assessing the likely impacts of potential development.
- 2.10** Section 2.7 of EN-3 deals specifically with onshore wind energy development and sets out a number of overarching principles that should be adhered to when assessing the impacts of wind energy development:

National designations: Consent 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.

Green Belts: When located in the Green Belt, elements of many projects will constitute inappropriate development, which may impact on the openness of the Green Belt. Careful consideration will therefore need to be given to the visual impact of projects, and developers will need to demonstrate very special circumstances that clearly outweigh any harm by reason of inappropriateness and any other harm if projects are to proceed.

Other locational considerations: As most renewable energy resources can only be developed where the resource exists and where economically feasible, the IPC 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).

- 2.11** Together EN-1 and EN-3 describe the types of potential impacts that should be assessed in relation to onshore wind proposals; explaining the potential nature of each type of impact, how they can be assessed and considered, and how they could be mitigated. EN-1 identifies impacts generic to all energy infrastructure, while EN-3 identifies impacts specific to onshore wind energy development. The latter includes:
- Biodiversity and geological conservation impacts
 - Historic environment impacts
 - Landscape and visual impacts
 - Noise and vibration impacts
 - Shadow flicker impacts
 - Traffic and transport impacts

2 Policy Context

2.12 Section 2.7 of EN-3 also provides an overview of key considerations likely to influence the selection of wind farm sites by applicants. These considerations, listed below, could be used to inform the identification of suitable areas for wind energy in Local Plans:

- Predicted wind speed
- Proximity of the site to buildings
- Capacity of the site (how many turbines can be accommodated)
- Electricity grid connection
- Access to the site

Ministerial Statement

2.13 On 18th June 2015 the government issued the following ministerial statement relating to the development of wind turbines:

When determining planning applications for wind energy development involving one or more wind turbines, local planning authorities should only grant planning permission if:

- *the development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan; and*
- *following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.*

In applying these new considerations, suitable areas for wind energy development will need to have been allocated clearly in a Local or Neighbourhood Plan. Maps showing the wind resource as favourable to wind turbines, or similar, will not be sufficient. Whether a proposal has the backing of the affected local community is a planning judgement for the local planning authority.

2.14 By creating additional tests that an application for wind energy development must meet, the tone of this statement appears to run counter to the broadly supportive nature of the NPPF. Firstly while the NPPF requires planning authorities to consider identifying suitable areas for wind turbines, the statement indicates that permission should be refused unless this work has been done; and secondly the statement is clear that the intention is to ensure that local people have the final say on planning applications. The result is that even where suitable areas for wind energy development have been identified in a Local Plan, following the objective approach advocated by the NPPF that includes assessing likely impacts in-line with the NPPFs, there is no guarantee that subsequent planning applications would be approved as the subjective opinion of 'affected local communities' is effectively the deciding factor and could override the assessments used to identify the area in the Local Plan.

2.15 Notwithstanding this observation, the ministerial statement is not planning policy. It is, however, a material consideration that should be afforded significant weight in both plan making and decision taking. Further information on the implementation of the statement is set out in the Planning Practice Guidance, which was updated following the issuing of the statement.

Planning Practice Guidance

- 2.16** In March 2014 the government published new web-based national Planning Practice Guidance (PPG) with the aim of bringing simplicity and clarity to the planning system. The PPG is intended to aid planning practitioners in interpreting legislation and implementing planning policy.
- 2.17** The PPG identifies that planning has an important role in the delivery of renewable and low carbon energy development in locations where the local environmental impact is acceptable. It also explains that, while all communities have a responsibility to help increase the use and supply of 'green' energy, this does not mean that the need for renewable energy automatically overrides environmental protections and the planning concerns of local communities.
- 2.18** The PPG acknowledges that there are no hard and fast rules about how suitable areas for renewable and low carbon energy development should be identified. However, it does note that landscape character areas could form the basis for considering which technologies at which scale may be appropriate in different types of location. It also suggests that local planning authorities should take into account the requirements of the technology and the potential impacts on the local environment, including from cumulative impacts.
- 2.19** In line with the 2015 ministerial statement the PPG reiterates that planning applications for the development of wind turbines should not be approved unless the proposed site is in an area identified as suitable in a Local or Neighbourhood Plan.
- 2.20** The PPG offers support for clear criteria based policies for renewable energy in Local Plans where they are expressed positively. It states that the following factors should be taken into account when developing criteria for inclusion in Local Plan policies:
- The need for renewable or low carbon energy does not automatically override environmental protections;
 - Cumulative impacts require particular attention, especially the increasing impact that wind turbines and large scale solar farms can have on landscape and local amenity as the number of turbines and solar arrays in an area increases;
 - Local topography is an important factor in assessing whether wind turbines and large scale solar farms could have a damaging effect on landscape and recognise that the impact can be as great in predominately flat landscapes as in hilly or mountainous areas;
 - Great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting;
 - Proposals in National Parks and Areas of Outstanding Natural Beauty, and in areas close to them where there could be an adverse impact on the protected area, will need careful consideration;
 - Protecting local amenity is an important consideration which should be given proper weight in planning decisions.

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Conclusion

- 2.21** Recent changes to the PPG brought about by the issuing of the ministerial statement in June 2015 have lead to an apparent disconnect with the NPPF. While national policy is clear that local planning authorities should have a positive strategy to promote renewable and low carbon energy generation, and that there is a responsibility on all communities to contribute to the generation of renewable and low carbon energy, national planning guidance states that the need for renewable energy does not automatically override the planning concerns of local communities and applications for wind energy development should not be granted unless significant work has already been carried out to identify areas where such development may be appropriate.

3 Evidence Base

- 3.1** The Planning Practice Guidance (PPG) identifies that there are no set rules on how suitable areas for wind energy development could be identified. Nevertheless, the relevant National Policy Statements identify both a range of overarching principles, which includes consideration of designated areas, and a set of potential impacts, which includes landscape impacts, that should be taken account of.
- 3.2** The issue of where wind energy development could be accommodated is not new and there is already considerable local and sub-regional evidence concerning wind energy development, in particular in relation to issues of landscape sensitivity and landscape character.
- 3.3** This section of the paper sets out a summary of this evidence to establish whether this could provide a suitable basis for the identification of suitable areas for wind energy development in the Local Plan.

Managing Landscape Change: Renewable and Low Carbon Energy Developments- a Landscape Sensitivity Framework for North Yorkshire and York (February 2012)

- 3.4** This document, referred to as the Landscape Sensitivity Framework, is focused on the role of landscape sensitivity in planning for renewable and low carbon energy. It aims to provide a useful reference for both policy making and decision taking, and is designed to encourage a positive approach to renewable and low carbon energy development.
- 3.5** In producing the framework the authors did not undertake new landscape sensitivity assessments or landscape capacity assessments; instead the report draws upon the existing relevant studies that were available at the time. As part of this work the report highlights a number of discrepancies between the various information sources, however, rather than seeking to resolve these discrepancies the report provides guidance on the respective limitations of previous studies to assist in their application going forward.
- 3.6** The key studies referenced in the Landscape Sensitivity Framework are:
- Low Carbon and Renewable Energy Capacity in Yorkshire and Humber (April 2011) **'The LGYH Energy Opportunities Study'**
 - Delivering Sustainable Energy in North Yorkshire: Recommended Planning Guidance (October 2005) **'The Sensitivity Study'**
 - North Yorkshire and York Landscape Characterisation Project (May 2011) **'The Character Study'**
- 3.7** The Landscape Sensitivity Framework provides an appraisal methodology to assist in the development of renewable and low carbon energy policies. In terms of the identification of areas or sites that are suitable for development, the methodology shows that existing information from the LGYH Energy Opportunities Study (April 2011) and the Sensitivity Study (October 2005) can be used to help identify areas of least constraint. However, it is clear that this does not constitute a landscape capacity assessment and that at the time of publication no such assessment has been undertaken for the North Yorkshire and York sub-region. As such the methodology would not identify where development could be accommodated in landscape terms and further assessment work would be required.
- 3.8** Section 3.4.2.2 of the framework quotes definitions of the following key concepts that are important when considering the suitability of an area for wind energy development:

3 Evidence Base

Landscape Character: Landscape relates not only to the physical attributes of the land but also to the experience of the receptor. Landscape character is made up of physical characteristics of land such as landform, woodland pattern etc. (which exist whether anyone sees them or not) plus a range of perceptual and value based responses to that landscape.

Landscape Sensitivity: Sensitivity relates to landscape character and how vulnerable this is to change. In this study, change relates to wind energy development and any findings on landscape sensitivity are restricted to this. Landscapes may have different sensitivities to other forms of change or development. Landscapes which are highly sensitive are at risk of having their key characteristics fundamentally altered by development and change may result in a different landscape character. Sensitivity is assessed by considering the physical characteristics and the perceptual characteristics of landscapes.

Landscape Capacity: This relates to how far a landscape can absorb or accommodate development without a fundamental change in character. Landscape character and sensitivity are part of this, but capacity can also include visibility assessment and any values (in the form of designations) relating to that landscape and whether change was acceptable. Therefore a landscape which has high sensitivity in terms of potential effects on its character would not necessarily have a low capacity and vice versa as there are other factors which need to be evaluated.

- 3.9** Notwithstanding the information above, it is important to note that since the framework was written the methodology for assessing landscape sensitivity has developed and now is expected to include consideration of the value of the landscape. The Guidelines for Landscape and Visual Impact Assessment 3rd Edition (Landscape Institute, 2013) states that landscape sensitivity is determined by combining judgements about the susceptibility of the landscape to change, as a result of a particular development, with judgements about the value of the landscape based on criteria and not just designation.

Low Carbon and Renewable Energy Capacity in Yorkshire and Humber (April 2011) (The LGYH Energy Opportunities Study)

- 3.10** The LGYH Energy Opportunities Study provides a strategic, high-level guide to the amount of renewable and low carbon energy potential within the region. It was produced by AECOM for Local Government Yorkshire and Humber to assist in the development of targets for renewable and low carbon energy.
- 3.11** The study provides energy opportunities plans to illustrate geographic areas of opportunity for district heating and combined heat and power (CHP), commercial scale wind energy, hydro energy, biomass, energy from waste and micro-generation technologies.
- 3.12** In assessing areas of opportunity for wind energy generation, the study first identified where potential wind resources would be technically and physically accessible, and then where they may also be 'economically viable' based on regulatory and planning concerns, including landscape sensitivity. This approach screens out areas where there may be a technically and physically accessible resource but where landscape sensitivity is considered too great.
- 3.13** In considering landscape sensitivity, the study does not include any new assessment, instead it takes sensitivity information from an assessment carried out in 2004 to inform the Regional Spatial Strategy, the Sub-Regional Renewable Energy Assessment and Targets Study (SREAT study) produced by AEAT. Although this study assesses sensitivity specific to wind energy development it considers landscape at a very broad scale based on National Character Areas.

Limitations

- 3.14** While the LGYH Energy Opportunities Study goes beyond identifying areas of opportunity based simply on the presence of a technically and physically accessible resource, the Landscape Sensitivity Framework is clear about the limitations of the study's approach, particularly with regard to landscape sensitivity.
- 3.15** The framework highlights problems with the reliability of using the high-level landscape characterisations provided by National Character Areas and applying them at the local level. In addition it identifies that these character areas were developed in 1998 by the Countryside Commission and were updated by Natural England in 2005. As such the resulting energy opportunities plan is not based on the most up-to-date information.
- 3.16** Notwithstanding questions over the method of establishing sensitivity, the study does identify areas of least constraint, in terms of landscape sensitivity, for commercial wind. However, as it does not include landscape capacity assessments it does not set out where development may or may not be acceptable in landscape terms. At the same time, it does not make judgements regarding the number of turbines or the size of turbines that might be acceptable in any given landscape.

Harrogate District Planning and Climate Change Study (May 2011) (The HBC Energy Opportunities Study)

- 3.17** Around the same time that the LGYH Energy Opportunities Study was being developed AECOM were also commissioned by Harrogate Borough Council to provide a strategic guide to the amount of renewable and low carbon energy potential within the district. The HBC Energy Opportunities Study was produced to assist in the development of the council's (withdrawn) Sites and Policies Development Plan Document (DPD). While the approach used in this study differs in some areas to that used in the LGYH study, it also provides an energy opportunity plan to illustrate geographic areas of opportunity for various renewable and low carbon technologies across the district, see appendix 1.
- 3.18** Within the study the assessment of large-scale wind energy opportunity was carried out in two stages. The first stage involved establishing the physically accessible resource based on the operation of a typical 2.5MW installed capacity wind turbine (tip height: 135m, rota diameter: 100m, hub height: 85m). The second stage involved establishing the practically viable resource through a constraints assessment that considered the extent to which a variety of constraints would reduce the physically accessible resource. The following constraints were included:
- **Engineering constraints:** Road, railways, inland waters (rivers, canals, lakes and reservoirs), built-up areas (houses, buildings), airports, buffers for roads and rail lines.
 - **Non-engineering constraints:** Noise, electromagnetic constraints (defence and aviation radar systems), landscape and environmental constraints.
- 3.19** In terms of landscape constraints the HBC Energy Opportunities Study takes a different approach to the LGH Energy Opportunities Study. Rather than using a landscape sensitivity assessment to screen out areas where the assessed sensitivity is considered too great, the HBC study instead excludes areas covered by national landscape designations (i.e. the Nidderdale AONB) from the physical accessible resource (when establishing the practically viable resource) but does not consider other areas of valued or sensitive landscape.
- 3.20** A similar approach of excluding designated areas is taken in order to address a number of other constraints, set out below, that are grouped in the report as 'environmental' constraints:

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- **Nature designations:** Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Local Nature Reserves.
- **Heritage designations:** World Heritage Site, Historic Battlefields, Registered Parks and Gardens, Scheduled Ancient Monuments, Conservation Areas, Listed Buildings.
- **Other designations:** Green Belt

Limitations

- 3.21** Like the GYH Energy Opportunities Study, the HBC Energy Opportunities Study goes beyond identifying areas of opportunity based simply on the presence of a technically and physically accessible resource. While both studies consider landscape constraints to some extent, albeit using different methods, the HBC study also considers a range of other ecological, heritage and planning policy constraints. Nevertheless there are important limitations with the methodology used.
- 3.22** Although the method of excluding areas of designation would go some way to protecting these areas from unacceptable impacts it is not sufficient to ensure that a wind energy proposal outside a designated area would not harm a designation nearby. Substantial further work would be required to identify where appropriate buffers to all the designations identified in the study would be required and how extensive these buffers should be. For example, in terms of heritage designations alone the district has a world heritage site, 2268 listed buildings (of which 49 are grade 1 and 115 are grade 2*), 171 scheduled monuments, 12 parks and gardens, 53 conservation areas, and 3 registered battlefields.
- 3.23** In terms of landscape constraints, while the approach used excludes areas of national designation it fails to recognise other valued or sensitive landscapes. As such it does not identify areas of least landscape constraint for commercial wind. Similarly, as it does not include landscape capacity assessments, it does not set out where development may or may not be acceptable in landscape terms. Nor does it not make judgements regarding the number of turbines or the size of turbines that might be acceptable in any given landscape.

Delivering Sustainable Energy in North Yorkshire: Recommended Planning Guidance (October 2005) (The Sensitivity Study)

- 3.24** This document, referred to as the Sensitivity Study, provides guidance to inform the development of planning policies and decision making relating to renewable and low carbon energy development. Together with Delivering Sustainable Energy in North Yorkshire: Recommended Guidance for Developing Energy Action Plans, the document was produced in order to encourage the appropriate development of sustainable energy systems within North Yorkshire.
- 3.25** A main element of the study was to understand the landscape sensitivity of different landscape areas across North Yorkshire to development associated with wind, biomass and hydroelectric schemes.
- 3.26** The study clearly sets out what is meant by the phrase sensitivity study and how this differs from a capacity study. It explains that sensitivity studies focus on the inherent sensitivities of an area to any 'development' (in this case wind turbines), highlighting those areas that are most vulnerable or 'sensitive' to changes in character. It goes on to explain that the overall sensitivity of a character area to development is a function of landscape character sensitivity and visual sensitivity of the landscape.

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- 3.27** In contrast capacity studies are more detailed and concentrated. The study explains that these assessments take the sensitivity information (overall landscape sensitivity to development), along with judgements about landscape value to draw out potential opportunities for a particular type of development, such as a windfarm of 30 turbines with tip heights of 100m. It identifies that landscape value could be taken from the designation status of the landscape, i.e. whether it is within a national park or an area of outstanding natural beauty (AONB), but ideally also considers stakeholder consensus on landscape values, including cultural and heritage values.
- 3.28** The result is that sensitivity studies usually present information on avoiding key sensitive or vulnerable areas whereas capacity studies present a more pro-active approach to guiding development to less sensitive or vulnerable areas.
- 3.29** The Sensitivity Study identifies 50 landscape character units, derived following a desk-based analysis of the 23 national landscape typologies present in the sub-region, as the basis for the sensitivity assessment, and considers sensitivity to three different scales of development, small, medium and large-scale. It assumes an overall turbine height of 100m (to tip) and defines each scale as:
- Small-scale developments: 1 to 5 turbines (100m to tip)
 - Medium-scale development: 6 to 25 turbines (100m to tip)
 - Large-scale development: 25+ turbines (100m to tip)
- 3.30** The results of the assessment for landscape areas in the Harrogate district are shown in the table below. A map of the overall sensitivity is included in appendix 2.

National Landscape Typology	Landscape Character Unit Code	Overall Sensitivity	Sensitivity to:		
			Small Scale Development	Medium Scale Development	Large Scale Development
High Hills	HDO	High	Medium-High	High	High
Low Hills	LBN2	Medium	Medium	Medium-High	High
	LBN4	Medium-Low	Medium-Low	Medium	Medium-High
	LCN3	Medium-Low	Medium-Low	Medium	Medium-High
Intermediate	RBD	Medium	Medium	Medium-High	High
	RLE3	Medium	Medium	Medium-High	High
	RPA2	Medium	Medium	Medium-High	High
	RPA3	Medium	Medium	Medium-High	High
Lowlands	UDW1	High	High	High	High
	UDW5	Medium	Medium	Medium-High	High
	UPA1	Medium-High	Medium-High	High	High
	UPA2	Medium-High	Medium-High	High	High
	UPA3	Medium	Medium	Medium-High	High
Valleys	VPA1	High	High	High	High
	VPA2	Medium-High	Medium-High	High	High

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	VPA3	Medium-High	Medium-High	High	High
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Table 3.1 Landscape Sensitivity to Wind Energy Development Across Landscape Character Units in Harrogate District

3.31 Some of the landscapes, including most where the sensitivity to even small scale commercial turbines is considered to be high or medium-high, have been considered further with regard to smaller (domestic scale) turbines, which are defined as being up to 50m tip height. The following commentary is provided:

- **RLE3; UDW5:** There may be opportunities for carefully sited individual or domestic scale turbines
- **UPA1; UPA2:** Individual small or domestic scale turbines may be more appropriate
- **UPA3:** There may be opportunities for carefully sited individual or domestic scale turbines
- **VPA1:** There may be limited potential for domestic scale developments with smaller turbines that could be sited to relate to individual settlements and farmsteads.
- **VPA2:** Domestic scale windfarms would be more suitable in this area
- **VPA3:** Domestic scale windfarms may be more suitable in this area

3.32 While the Sensitivity Study does not consider landscape value within its assessment, since it is not a landscape capacity assessment, it does provide commentary regarding the relationship between national landscape designations, such as national parks and areas of outstanding natural beauty (AONBs), and the revealed sensitivity of the character areas. This helps to identify areas where the intrinsic landscape sensitivity is lower than expected of a designated landscape and, therefore, where the value placed on that landscape serves to decrease the capacity of that landscape to development. Nevertheless the Sensitivity Study does not seek to alter the sensitivity of landscapes falling within the designated areas.

3.33 The nationally designated Nidderdale AONB covers a significant proportion of the Local Plan area. The extent of national landscape designations across North Yorkshire are shown in appendix 3. The study identifies that:

Much of the AONB, including the high moorland and the upper part of Nidderdale, as being of high sensitivity to wind energy development. The lower parts of the dale, together with lower areas of moorland, are classed as medium-high sensitivity, while the transitional slopes along the eastern edge of the area are classed as medium sensitivity due to greater perception of built-up areas and man made features.

Although there are areas of medium sensitivity it is likely that commercial scale wind turbines would be inappropriate due to the values placed on the landscape, through its designation. Domestic scale wind turbines could be considered, particularly in the lower parts of the dales and along the area's eastern fringe.

Limitations

3.34 While the assessments in the Sensitivity Assessment identify areas most sensitive or vulnerable to wind energy development, they do not provide sufficient information to guide development to areas where it can be accommodated in landscape terms. This is because they do not take account of landscape value or make judgements in relation to landscape

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capacity, which would have been included had landscape capacity assessments been completed. As a result, the assessment does not identify opportunities for specific development types i.e. the number of turbines of a particular height in a particular area.

- 3.35** It is also important to highlight that since these assessments were carried out the methodology for assessing landscape sensitivity has developed and now is expected to include consideration of the value of the landscape. The Guidelines for Landscape and Visual Impact Assessment 3rd Edition (Landscape Institute, 2013) states that landscape sensitivity is determined by combining judgements about the susceptibility of the landscape to change as a result of a particular development with judgements about the value of the landscape based on criteria and not just designation. This means that to be in line with current best practice these assessments would require updating following a detailed review and additional work.
- 3.36** In considering the results it should also be noted that whilst areas of lower sensitivity may have greater capacity for wind energy development in terms of landscape character and scenic quality generally, this does not mean that individual sites in areas of lower sensitivity will be suitable. Nor does it mean that all locations in areas of higher sensitivity will all be unsuitable. The study does not remove the need for detailed consideration of landscape and visual impact on a case-by-case basis.
- 3.37** Finally it should be recognised that the height of individual commercial-scale wind turbines has increased significantly since the assessments were carried out, with many modern turbines measuring over 140m (to tip) rather than the 100m used in the study. This raises concerns regarding the reliability of the sensitivity assessments when applied to current commercial-scale turbines, and while landscape sensitivity to these larger turbines has not been assessed, it can be assumed that the levels of sensitivity shown in the table above would be magnified.

North Yorkshire and York Landscape Characterisation Project (May 2011) (The Character Study)

- 3.38** The North Yorkshire and York Landscape Characterisation Project is the first overarching landscape character assessment for the sub-region as a whole prepared using a consistent methodology, and is the most up-to-date assessment of the landscape character of the district.
- 3.39** The assessment splits the study area into a number of Primary Landscape Units, such as urban landscapes, coastal landscapes and limestone landscapes etc. and then identifies the Landscape Character Types present within each of the units. For example it identifies that the upland fringe landscape unit contains the following character types: farmed dale, narrow upland dale, broad valley, wooded hills and valleys, moors fringe and rolling upland farmland. Landscape Character Types are different to Landscape Character Areas in that they are typologies, rather than specific geographic areas and, as such, a particular character type may exist discontinuously in several parts of a study area.
- 3.40** The study then makes judgements in relation to the sensitivity of each Landscape Character Type to development or change in land-use of any kind, including, but not specific to, renewable and low carbon energy.
- 3.41** The study sets out the following information for each of the Landscape Character Types:
- Characterisation:** An assessment of the factors, features and attributes that combine to create a sense of place:
- Key characteristics

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- Description
- Definitive attributes

Evaluation: To determine forces for change and sensitivity of landscape to change:

- Forces for change
- Sensitivity to change: provides sensitivity judgements in relation to visual sensitivity, ecological sensitivity and landscape sensitivity
- Guidance to aid the process of managing landscape change by highlighting needs and opportunities to inform planning and land management decisions

3.42 The table below summarises the sensitivity judgements for each of the eight Landscape Character Types identified by the study as present in the Harrogate district.

Landscape Character Type	Visual Sensitivity	Ecological Sensitivity	Landscape Sensitivity
1. Urban	N/A	N/A	N/A
6. Magnesian Limestone Ridge	Moderate to High	High	High
13. Moors Fringe	High	Moderate	High
24. River Floodplain	High	High	High
29. Undulating Lowland Farmland	Moderate	Moderate	Moderate
34. Gritstone High Moors and Fells	High	High	High
35. Gritstone Low Moors and Fells	High	High	High
36. Gritstone Valley	High	Moderate	High

Table 3.2 Visual, Ecological and Landscape Sensitivity by Landscape Character Type

3.43 Maps showing the landscape sensitivity, visual sensitivity and ecological sensitivity judgements for the whole study area based on the analysis in the Character Study have been created as part of the preparation of the Landscape Sensitivity Framework. These are presented in appendices 4a, 4b and 4c respectively.

Limitations

3.44 While the Character Study is the most up-to-date assessment of the landscape character of the district, it is important to note that the assessments of landscape, visual and ecological sensitivity are not specific to wind energy development. Instead they are generalised assessments that relate to no specific form of development and as such they should not be used as definitive constraints to a particular form of development. Due to the generalised nature of the assessments the results should be treated with caution and used as a secondary source of information where development specific studies are available.

3.45 It should also be noted that the assessment of ecological sensitivity is based on a judgement made in relation to the importance of characteristics and/or designated habitats in a Landscape Character Type at a landscape scale and as such it is not a substitute for a detailed ecological survey or assessment of potential effects at a site level. Nevertheless it does provide strategic guidance around the sensitivity of biodiversity as a resource within each Landscape Character Type.

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- 3.46** Although there are limitations to the sensitivity assessments, there could be potential for information from the characterisation process to be used in conjunction with local level assessments to identify the key constraints and opportunities associated with particular landscapes.

Conclusion

- 3.47** The Landscape Sensitivity Framework identifies a methodology that could assist in the identification of suitable areas by identifying areas of least constraint in terms of landscape. However, the framework concludes that landscape capacity assessments would be required in order to identify areas where the landscape can accommodate such development.
- 3.48** While the LGYH Energy Opportunities Study identifies areas of opportunity for wind energy development with reference to landscape sensitivity specific to this kind of development, the high-level landscape character areas used are not considered to provide a reliable basis for application at the local level. In addition these character areas have been updated since the study and are, therefore, no longer up-to-date.
- 3.49** The Sensitivity Study provides information on landscape sensitivity to wind energy development based on a more detailed consideration of landscape character types. However, while the study identifies areas most sensitive to this development it does not identify areas where it could be accommodated in landscape terms because it does not include landscape capacity assessments.
- 3.50** In addition doubts have arisen regarding the reliability of the sensitivity assessments going forward, both in terms of the methodology used, which no longer constitutes best practice, and the assumed height of turbines, which no longer reflect the turbine heights now commonly associated with commercial schemes.
- 3.51** The HBC Energy Opportunities Study takes a broad approach to landscape issues that does not consider landscape capacity or sensitivity through any form of assessment. The result is that while the nationally designated Nidderdale AONB is excluded from the areas of opportunity for wind energy development, landscape issues elsewhere have not been considered in the identification of these areas.
- 3.52** The HBC study does consider some important additional nature, heritage and planning policy constraints that do not feature in other assessments. However, the approach would not ensure that proposals outside a designated area would not harm a designation nearby, and substantial further work would be required to identify where additional buffers would be required.
- 3.53** The Character Study provides the most up-to-date assessment of the landscape character of the district as well as the most up-to-date assessments of landscape, visual and ecological sensitivity. However, the sensitivity assessments are not specific to wind energy development and as such should not be used as definitive constraint to this development.
- 3.54** Although the Planning Practice Guidance (PPG) states that there are no set rules on how suitable areas for wind energy development could be identified, the relevant National Policy Statements (NPSs) identify both a range of overarching principles, which includes consideration of designated areas, and a set of potential impacts, which includes landscape impacts, that should be taken account of. With this in mind, the review of the evidence shows that while there is important information that would be useful when identifying suitable areas, the existing local and sub-regional evidence base alone does not provide a suitable basis for the identification of suitable areas for wind energy development.

3 Evidence Base

- 3.55** Whilst there is evidence relating to where there is a physically and technically available wind resource, and much evidence relating to landscape issues, there is no existing data source, or combination of sources, that identifies the landscape sensitivity of different areas to wind energy development using an up-to-date method. Nor is there information on areas where this development could be accommodated in landscape terms. Nevertheless the evidence does indicate that much of the district's landscape is likely to be sensitive to wind energy development and that further detailed work would be required in order to identify suitable areas in terms of landscape impacts.
- 3.56** In addition, substantial further work would be required to ensure adequate protection for areas with a range of nature and heritage designations. There would also need to be work to ensure that the other potential impacts that the PPSs identify would need to be assessed, including noise and vibration and shadow flicker etc., are fully considered.

The Local Plan Approach 4

4 The Local Plan Approach

- 4.1** This section details the council's approach to renewable and low carbon energy development proposed in the Local Plan. The approach in relation to wind energy development takes account of the policy context set out in section 2 of this paper, and has been informed by the local evidence base summarised in section 3.

Policy CC3: Renewable and Low Carbon Energy

- 4.2** Policy CC3 provides a criteria-based policy for the assessment of planning applications for the development of renewable and low carbon energy technologies.

CC3: Renewable and Low Carbon Energy

- A. Permission will be granted for renewable and low carbon energy projects, including incorporating small-scale renewable and low carbon energy generation into the design of new developments where appropriate, feasible and viable, provided that:
- i. The proposal does not have an unacceptable adverse impact on the landscape, the natural environment, biodiversity, the cultural environment, the historic environment, adjoining land uses and residential amenity;⁽¹⁾ and
 - ii. Appropriate mitigation measures would be taken to minimise and, where possible address, adverse impacts; and
 - iii. The proposal avoids unacceptable cumulative landscape and visual impacts.
- B. Proposals for wind turbines must also, following consultation, demonstrate that the planning impacts identified by affected local communities have been fully addressed and, therefore, the proposal has their backing; and
- i. Be located in an area identified as being suitable for such use within a Neighbourhood Plan; or
 - ii. For small-scale turbines: be directly related to, and generate power principally for, the operation of a farmstead, other rural business or a local settlement.

- 4.3** The Planning Practice Guidance (PPG) supports clear criteria-based policies where they are expressed positively. The development of the criteria included within policy CC3 has taken account of the specific factors identified in the PPG and outlined in section 2 of this paper. Account has also been taken of the comments received during consultations throughout the plan-making process, including those of statutory consultees.

- 4.4** It is, therefore, considered that the policy adequately responds to the factors identified in the PPG and represents a positive strategy to promote renewable and low carbon energy, and maximise development whilst ensuring adverse impacts are addressed satisfactorily, as required by the National Planning Policy Framework. Together with other policies in the plan (where relevant), policy CC3 provides an appropriate basis to ensure that planning decisions for wind energy development are made in-line with national guidance.

¹ The historic environment includes the archaeological environment

4 The Local Plan Approach

The Identification of Suitable Areas for Wind Energy Development

- 4.5** The Local Plan does not identify areas as suitable for wind energy development, however, this does not reflect a view that the district, as a whole, is not suitable for such development. This approach has been informed by national policy in the National Planning Policy Framework (NPPF), existing local and sub-regional evidence, and the comments received during consultations throughout the plan-making process.
- 4.6** The review of existing evidence, which relates only to commercial scale turbine heights, identifies that the district is very heavily constrained by landscape considerations and much of the district's landscape would be sensitive to this kind of wind energy development. At the same time the review identifies that there is no existing data source, or combination of sources, that identifies the landscape sensitivity of different areas to this development using an up-to-date method, nor is there information on areas where this development could be accommodated in landscape terms. It concludes that in order to identify suitable areas in line with national policy and guidance, there would need to be significant additional work to understand landscape sensitivity and landscape capacity, ensure protection for sites with nature and heritage designations and, fully understand other potential impacts such as noise and vibration.
- 4.7** Paragraph 97 of the NPPF requires the council to consider identifying suitable areas for wind energy development where this would help secure such development. It is considered that, given the extent of the landscape constraints, the significant amount of work that would be required in order to resolve the areas to be identified as suitable would be disproportionate for the extent of areas likely to be found suitable.
- 4.8** It has also been noted that during consultations carried out as the policy has developed that the council has not received comments from the renewables industry calling for the identification of suitable areas. Whilst this does not indicate that development proposals would not come forward if areas were identified, it does indicate that the council has no evidence to suggest that the work required would result in proposals coming forward.
- 4.9** In addition it is recognised that provision within the ministerial statement requiring that proposals obtain the backing of affected local communities (even when identified in the plan following a rigorous assessment) may also serve to reduce the effectiveness of identifying areas in securing actual development.

Ministerial Statement

- 4.10** The policy responds positively to the provisions in the ministerial statement. It incorporates the provision that permission for wind energy development should not be granted unless it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and, therefore, the proposal has their backing.
- 4.11** It also includes the provision that sites for such development must be in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan and applies this to all proposals except those for small-scale turbines.
- 4.12** As no suitable areas for the development of larger-scale turbines have been identified in the Local Plan the precise policy wording omits an unnecessary reference to the Local Plan but retains reference to Neighbourhood Plans in recognition that suitable areas may be identified in these documents.

The Local Plan Approach 4

The Approach to Small-Scale Turbines

- 4.13** The exception of proposals for small-scale wind turbines (in respect of height) from the requirement to be in an area identified as suitable in the Local Plan seeks to ensure that small-scale turbines can continue to be delivered in the district.
- 4.14** As the evidence regarding the suitability of areas for wind turbines focuses on commercial-scale turbines, the council has no district-wide evidence relating specifically to the suitability of areas for the development of small-scale turbines. Nevertheless it is considered that it would be unreasonable to dismiss proposals for such development simply on the basis that specific suitable areas have not been identified. Therefore, rather than imposing a blanket ban on this development, the Local Plan seeks to support the delivery of small-scale turbines where they are directly related to the operation of a farmstead, other rural business or a local settlement.
- 4.15** In affect the policy implies that the whole plan area is suitable for the development of small-scale turbines subject to the criteria set out in the policy, which include the provisions of the ministerial statement.
- 4.16** It is acknowledged that, as written, there is no formal definition of a small-scale wind turbine within the policy wording. In essence what constitutes a small-scale turbine is to be determined on a case-by-case basis, which reflects the fact that what might be considered to be small (and acceptable) in one area might be considered large (and unacceptable) in another.
- 4.17** Although it has been suggested that a turbine measuring up to 25m (to tip) would generally meet the energy requirements of a farmstead or other rural business, there is no industry-wide definition of the various scales of wind turbines. Nevertheless the observations of Renewables UK (in their Small and Medium Wind: UK Market Report) in respect of turbine size, shown in the following table, provide a useful starting point:

Description	Size (Total Height) (m)	Output (Kw)
Micro	10 to 18	0 to 1.5
Small	15 to 50	1.5 to 50
Medium	25 to 65	50 to 500
Large	65+	500+

Table 4.1 Heights and Outputs of Various Scales of Wind Turbines (Source: Renewables UK March 2015)

- 4.18** While the table makes clear distinctions between small and medium scale turbines in terms of power output, it shows no clear distinction between these turbines in terms of height. This is likely to be a reflection that different products on the market have different levels of efficiency in generating electricity and that a distinction based on output is more useful to the industry. Nevertheless it is considered reasonable to assume that a small-scale turbine would have a maximum height of between 25 and 50 metres. It is felt that this range will allow for the construction of small-scale turbines similar to those currently in operation, subject to the other criteria in the policy, including the requirement to have the backing of affected local communities as required by the ministerial statement.

5 Appendices

5 Appendices

Appendix 1

Energy Opportunity Plan for Harrogate District

Source: Harrogate District Planning and Climate Change Study (AECOM for Harrogate Borough Council, 2011)

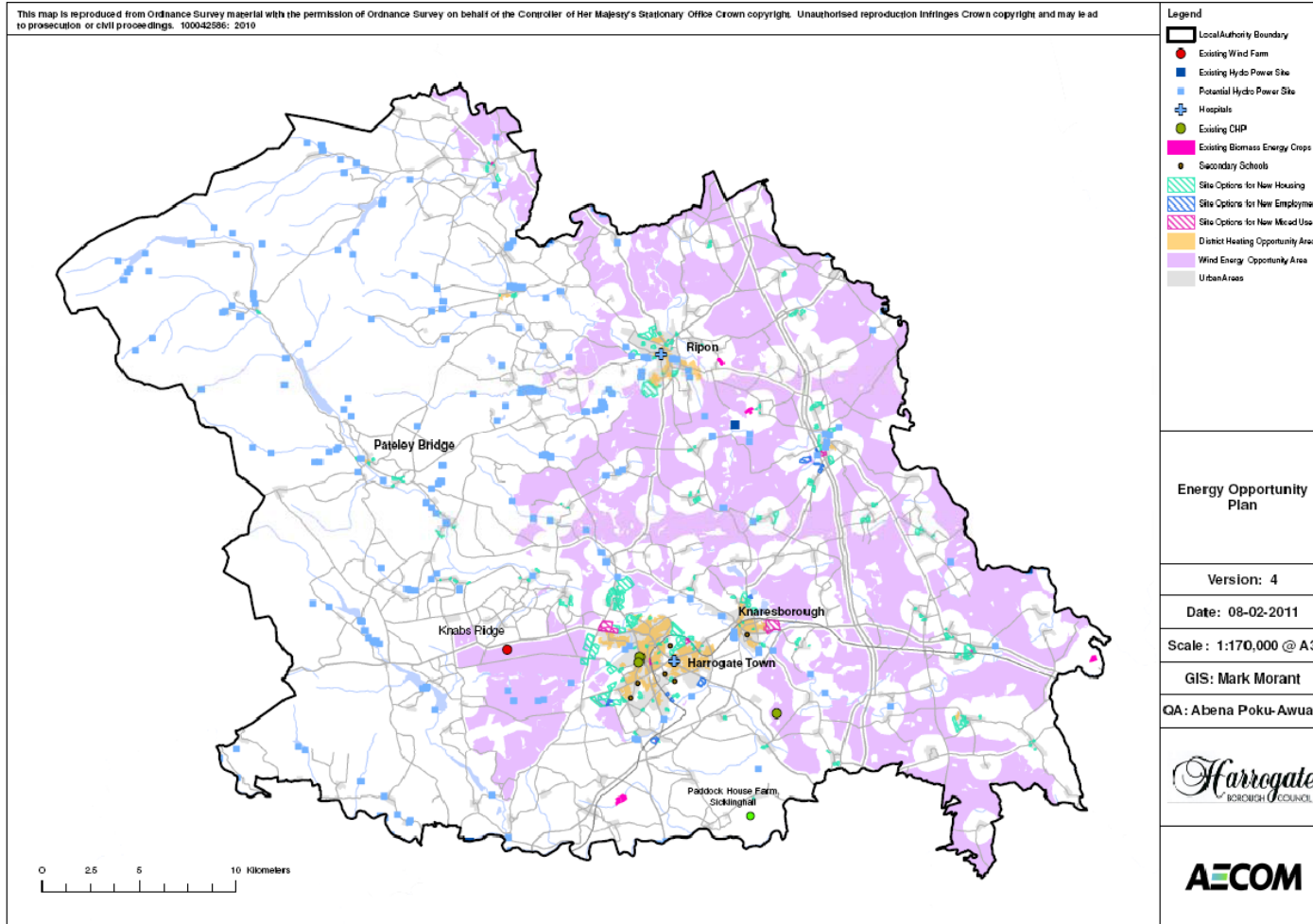


Figure 39 Energy Opportunities Plan for Harrogate District

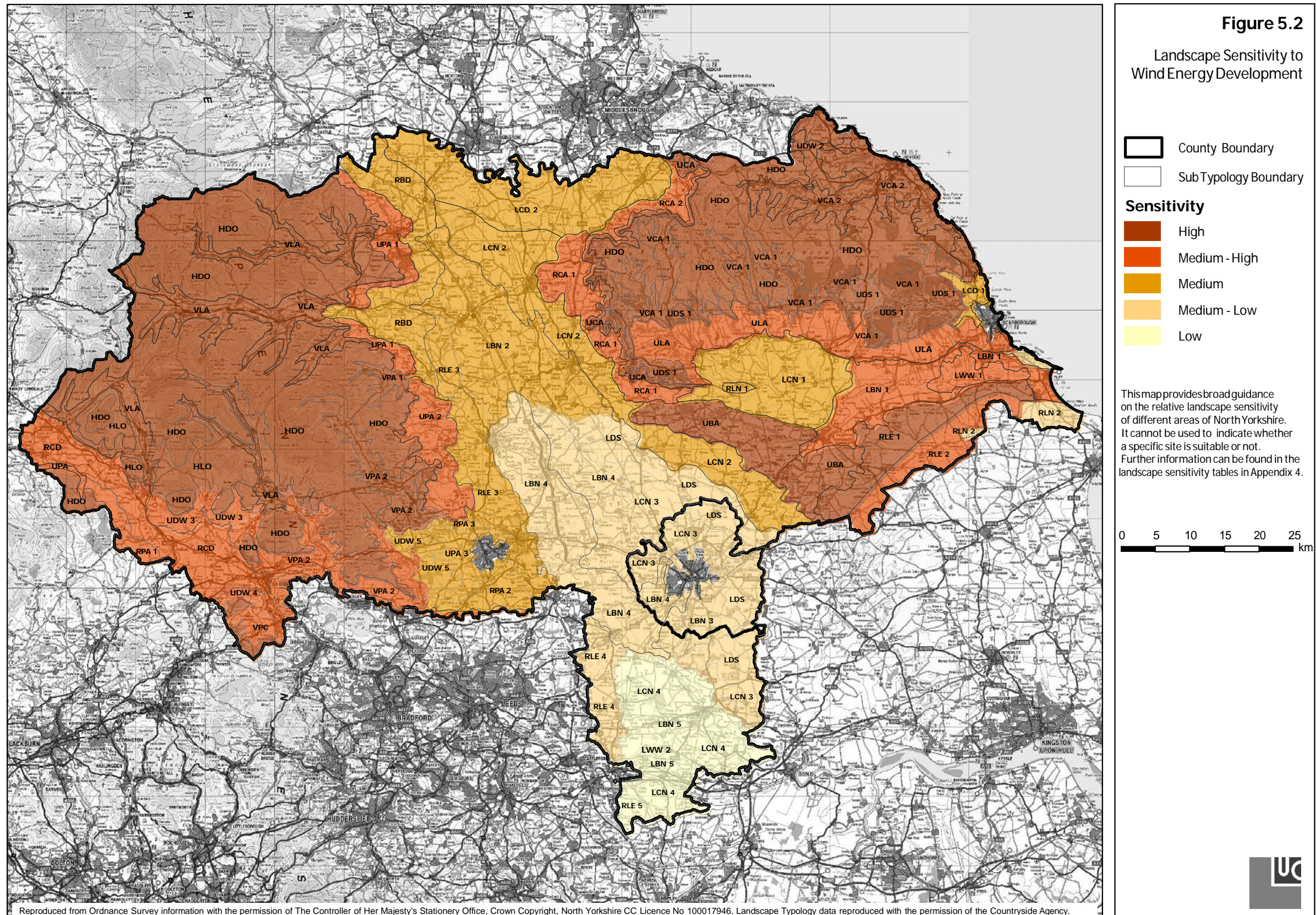
Picture 5.1 Energy Opportunity Plan for Harrogate District

5 Appendices

Appendix 2

Landscape Sensitivity to Wind Energy Development in North Yorkshire

Source: Delivering Sustainable Energy In North Yorkshire: Recommended Planning Guidance (Land Use Consultants for a Partnership of North Yorkshire Authorities, 2005)

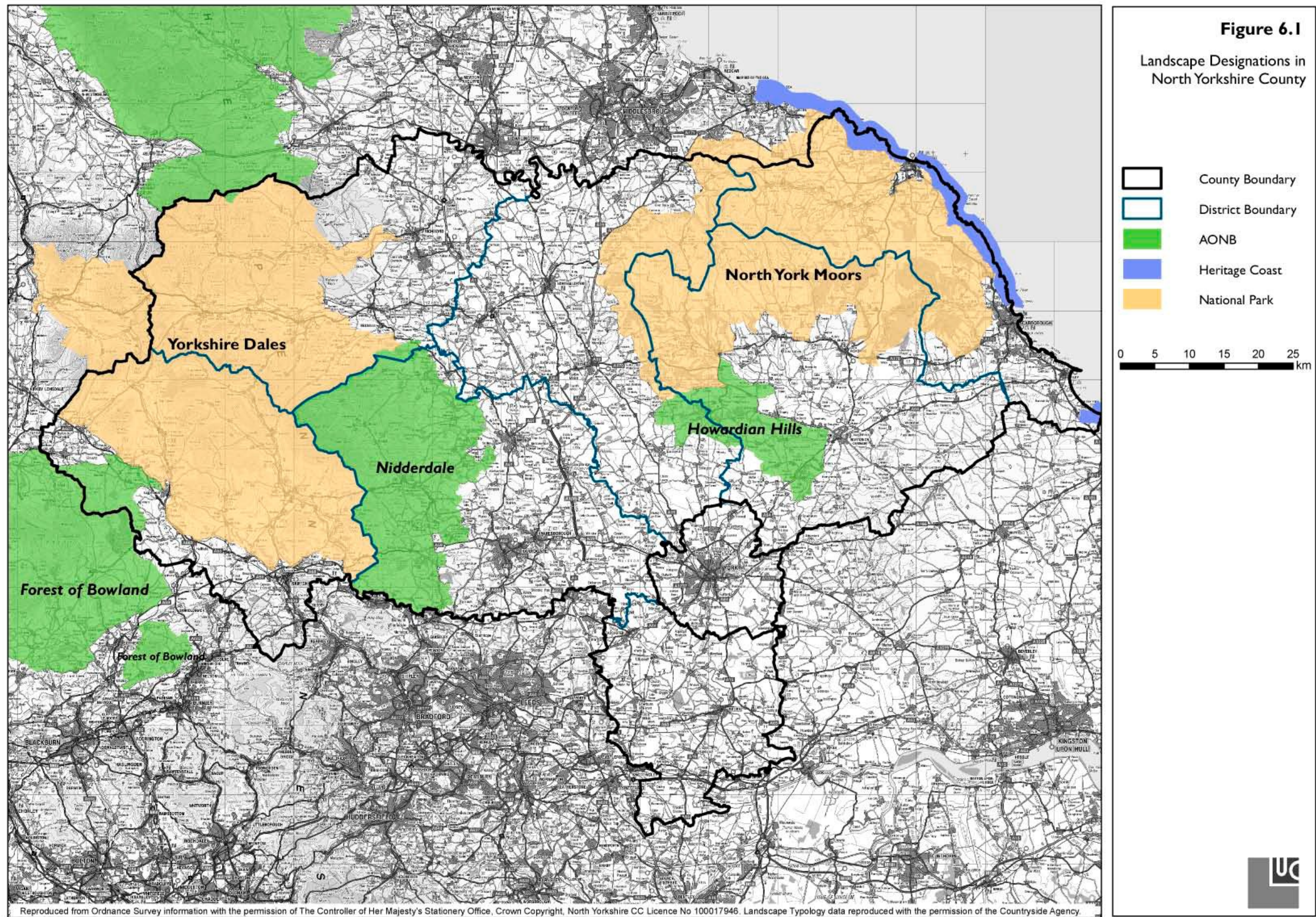


Picture 5.2 Landscape Sensitivity to Wind Energy Development

Appendix 3

National Landscape Designations in North Yorkshire

Source: Delivering Sustainable Energy In North Yorkshire: Recommended Planning Guidance (Land Use Consultants for a Partnership of North Yorkshire Authorities, 2005)



Picture 5.3 National Landscape Designations in North Yorkshire

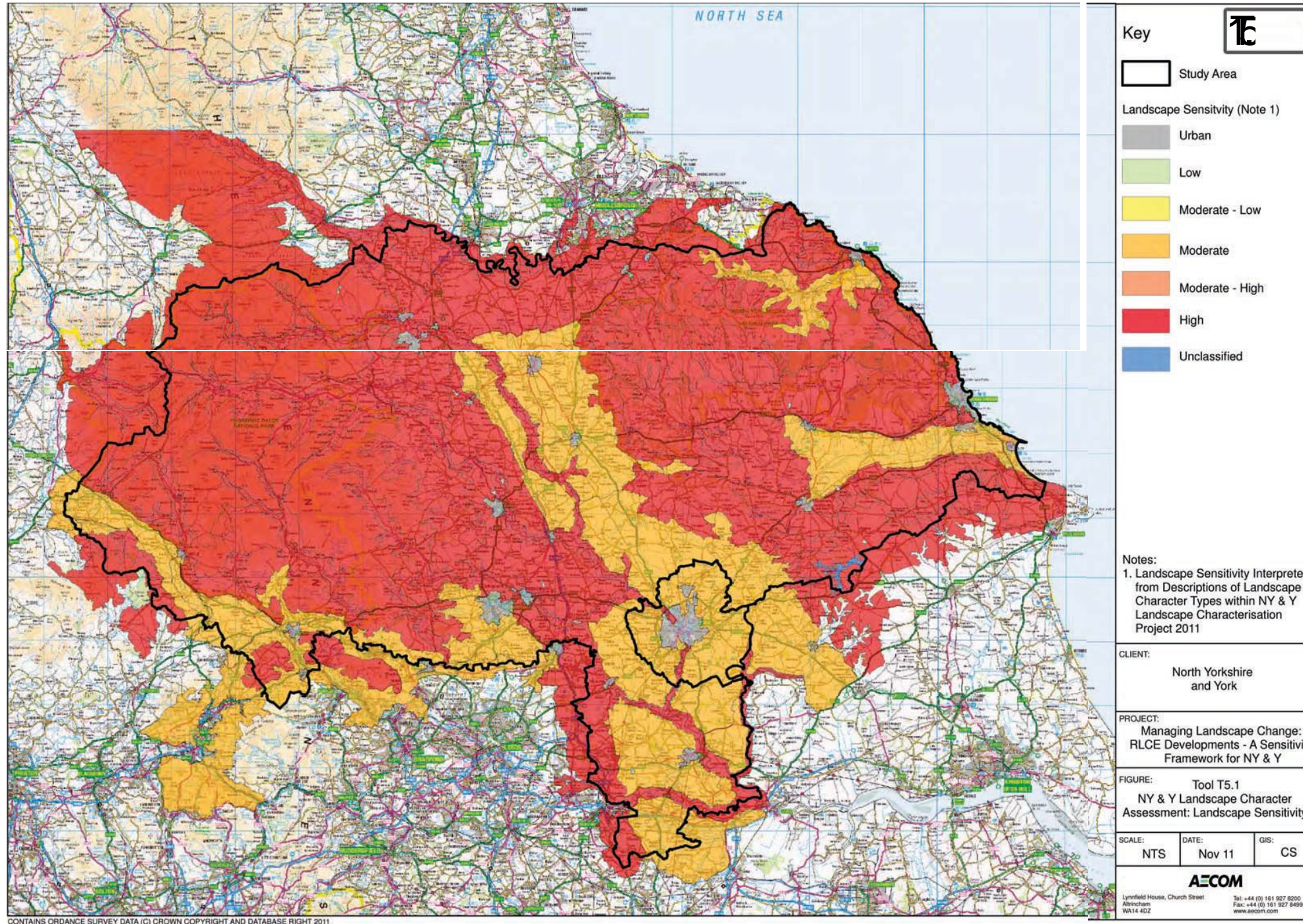
Appendix 4

a) **Landscape Sensitivity Interpreted from Descriptions of Landscape Character Types within the North Yorkshire and York Landscape Characterisation Project (North Yorkshire County Council, 2011)**

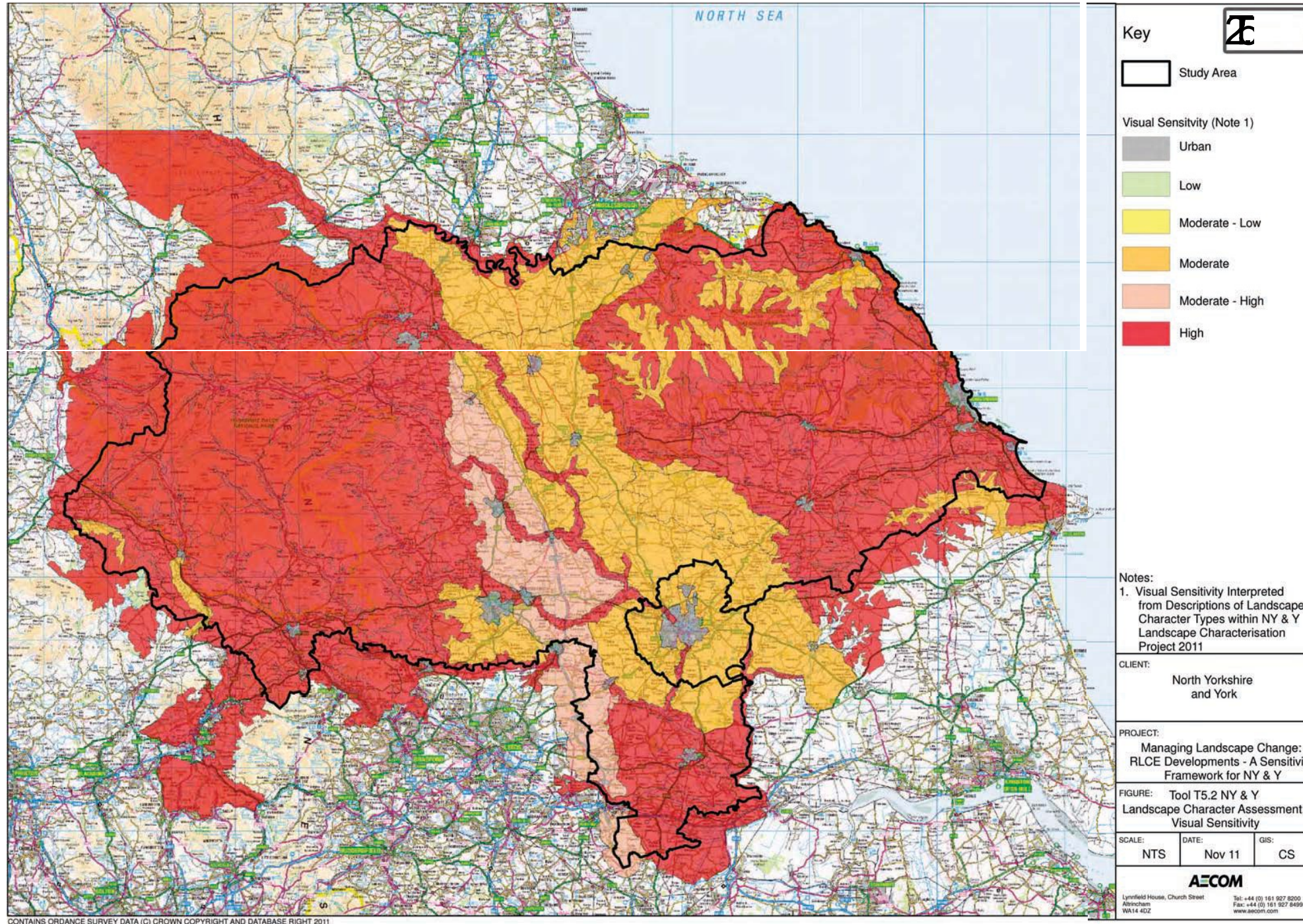
b) **Visual Sensitivity Interpreted from Descriptions of Landscape Character Types within the North Yorkshire and York Landscape Characterisation Project (North Yorkshire County Council, 2011)**

c) **Ecological Sensitivity Interpreted from Descriptions of Landscape Character Types within the North Yorkshire and York Landscape Characterisation Project (North Yorkshire County Council, 2011)**

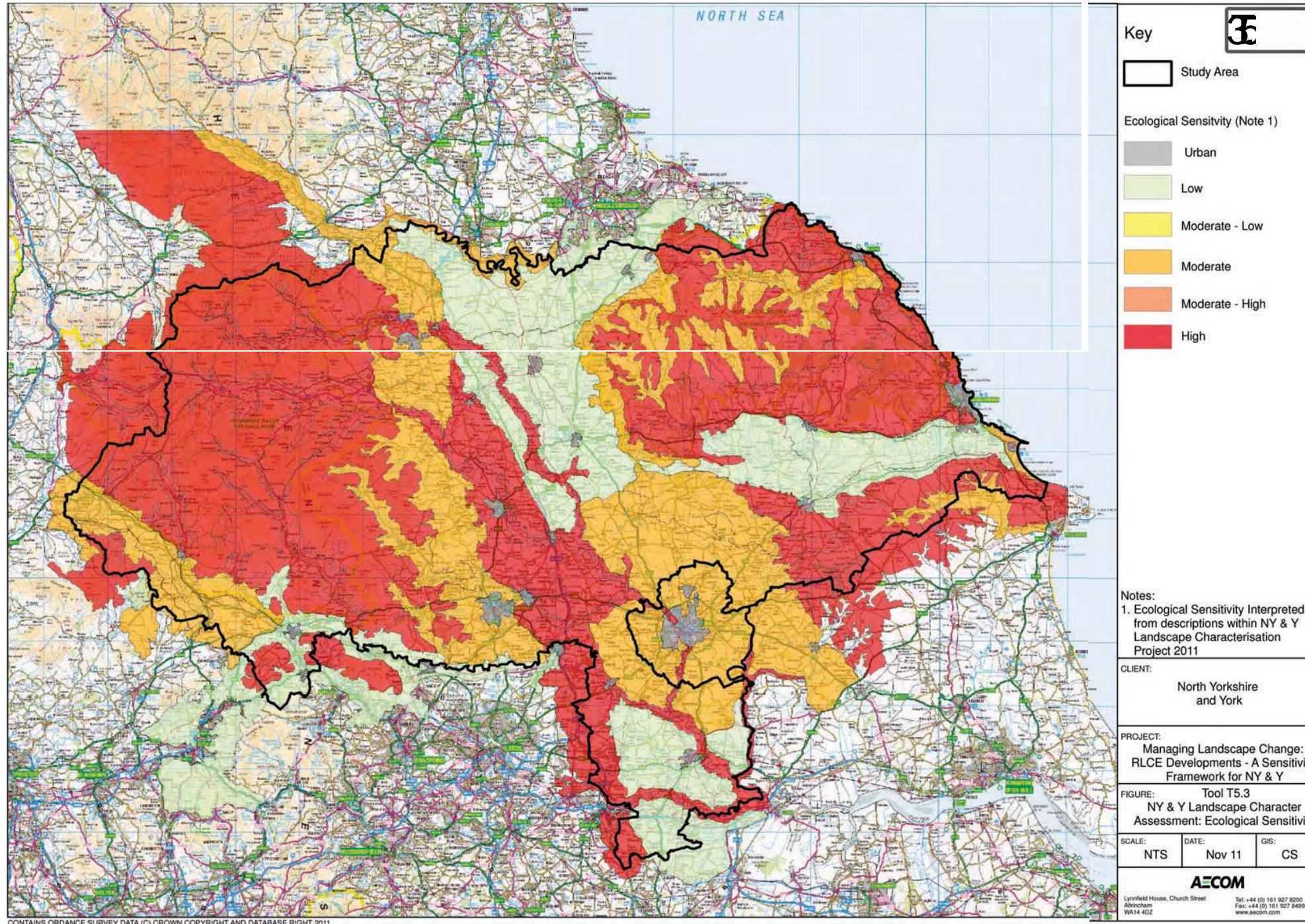
Source: Managing Landscape Change: Renewable and Low Carbon Energy Developments- a Landscape Sensitivity Framework for North Yorkshire and York (AECOM for North Yorkshire and York (via Local Government Yorkshire and Humber), February 2012)



Picture 5.4 Landscape Sensitivity Interpreted from Landscape Character Types within North Yorkshire and York



Picture 5.5 Visual Sensitivity Interpreted from Descriptions of Landscape Character types within North Yorkshire and York



Picture 5.6 Ecological Sensitivity Interpreted from Descriptions of Landscape Character Types in North Yorkshire and York

