



**Review of 'Suitability' of Areas for Wind Turbine
Development as identified by Northumberland County
Council for the Purposes of the
Emerging Northumberland Local Plan**

Final Report

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1: Introduction

1.1 Background

1.1.1 Alison Farmer Associates (AFA) was appointed in July 2018 by the Northumberland and Newcastle Society (The Society) to undertake a review of the recently completed *Assessment of the Sensitivity of the Landscape of Northumberland to Wind Energy Development* and subsequent policy development in the Northumberland Local Plan (currently at consultation – ‘the Local Plan’). The contents of this review are to inform representations made by The Society in response to the Local Plan Consultation.

1.1.2 This report has been prepared following a desk study review of relevant documents and two days site assessment in August 2018. AFA previously undertook the Northumberland National Park and Tynedale District Landscape Character Assessment in 2008 and more recently reviewed this on behalf of the Northumberland National Park Authority as part of their Local Plan evidence base up date. AFA has also undertaken sensitivity and capacity studies for wind farm development in Northern Ireland and the South Pennines and given landscape evidence at numerous wind farm inquiries.

1.1.3 In particular, this review has included consideration of the following documents:

- *Assessment to the Sensitivity of the Landscapes of Northumberland to Wind Energy Development*, January 2018, The Planning & Environment Studio and Bayou Bluenvirobmental (referred to as the PES study throughout this report).
- *Brief for Proposed Study to Assess the Sensitivity of Landscapes in Northumberland to Wind Turbine Development*, June 2016, Northumberland County Council.
- *Northumberland Local Plan Technical document: Suitable areas for wind turbine development in Northumberland*, March 2018, Northumberland County Council.
- Northumberland Local Plan - Draft Plan for Regulation 18 Consultation, July 2018.
- *Assessment of the Extent to which Existing Onshore Wind Developments in Northumberland Have Been Successfully Accommodated into the Landscape*, May 2015, The Planning & Environment Studio and Bayou Bluenvirobmental.

1.1.4 The scope of the review has been to consider the approach adopted in the PES study and its use by the Local Authority in defining areas 'suitable for wind farm development'. The brief also requested that landscape character areas 8b, c and d;

10a; 12a; 15a; 6a; and 18c and d be reviewed specifically to consider the appropriateness of identifying 'suitable areas for wind turbines' in these locations.

- 1.1.5 This review has concluded that there are inherent problems with mapping suitability based on sensitivity assessments and practical difficulties with accommodating wind turbines in areas which are mapped as suitable. It is concluded therefore that NCC's strategic approach to the 'identification of suitable areas for wind turbines' should be abandoned with reliance placed on a criteria-based policy approach, and where Neighbourhood Plans may support wind turbine development based on specific site evaluation and with support from local communities. This would be consistent with the approach to other forms of renewable energy development and which would not be inconsistent with Government guidance in the NPPF and PPG.

1.2 NPPF and Ministerial Statement

- 1.2.1 National Planning Policy specifically relating to renewable and low carbon energy is set out in section 14 of the recently published revision of the NPPF. The NPPF is a 'high level' document and covers the challenge of climate change and related issues briefly. Importantly the revised NPPF:

- expressly applies the Written Ministerial Statement of 18th June 2015 ('the WMS') stating that *'development involving one or more turbines should not be considered acceptable unless it is in an area identified as suitable for wind energy development in the development plan; and, following consultation, it can be demonstrated that the planning impacts identified by the affected local community have been fully addressed and the proposal has their backing'* (footnote 49 to paragraph 154).
- specifically requires landscapes to be taken into account in local plans otherwise proactive in mitigating and adapting to climate change (paragraph 149).

- 1.2.2 This is consistent with the PPG's guidance which states that:

- *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 [it is important to] 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.'*

1.2.3 While the specific extracts from the PPG set out above are expressed in terms of individual planning applications, the issues are also relevant to the identification of 'suitable areas' for wind turbine development. However, there is no definition of what the term 'suitable' means. The NPPF and PPG do not define the term, though the PPG, under the heading, 'How are 'suitable areas' defined in relation to wind energy development?' states that: '*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.*'

1.2.4 The PPG makes it clear that '*There are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, local planning authorities will need to ensure they take into account the requirements of the technology and, critically, the potential impacts on the local environment, including from cumulative impacts. The views of local communities likely to be affected should be listened to.' [emphasis added].*

1.2.5 These points are considered in section 3 of this report which looks more closely at the approach adopted by NCC in defining 'suitable areas'.

1.3 Northumberland Local Plan

1.3.1 The Local Plan is currently at consultation stage. Subject to that consultation, NCC has sought to identify 'suitable areas' for wind farm development' and these are associated with planning policies REN 1 and REN 2 which also contain a set of criteria for assessing whether the effects of any individual scheme have been satisfactorily addressed. The 'suitable areas' are mapped and available in hard copy and on line as an interactive map. These maps show extensive areas that have been identified as 'suitable' for turbines of different heights.

1.3.2 The Council has confirmed that 66% of the County's gross land area, excluding the National Park and the AONB's, is so 'identified'¹.

¹ Email correspondence between the Society and NCC planning officer, Kevin Tipple.

1.4 Current Windfarms in Northumberland

1.4.1 Based on table 2 of the PES study, current wind farm developments in Northumberland are made up of the following size turbines:

| Turbine size | Meters | Percentage |
|-----------------|---------------|------------|
| Large | 100m height + | 57% |
| Medium to Large | 55-100m | 3% |
| Small - Medium | 25-55m | 11% |
| Small | below 25m | 29% |

1.4.2 It can be seen from this that 'large' turbines over 100m high make up the majority of wind energy development in the Northumberland landscape comprising wind farms of between 2 and 18 number turbines and a couple of single turbines. The second most common scale of turbine is 'small', generally comprising single domestic scale turbines. To date medium size turbines (between 25m and 100m) are far less common.

1.4.3 Trends for wind farm development point towards the growth of small-scale micro-generation with those covered by the GPDO becoming more common in rural areas, associated with individual farmsteads or properties. GPDO-permitted turbines and those NCC classifies as 'small' (less than 25m) and 'small-medium' turbines (26-40m's)² raise important issues in terms of local plan policy. While in the past large-scale wind farm development has had a profound effect on the Northumberland landscape it is potentially the proliferation of smaller scale wind turbine development that may have detrimental effects in coming years. The current slowing of commercial large-scale wind farm development (as a result of lack of subsidy support) is likely to be reversed if and when direct or indirect subsidies are re-instated.

² N.B. NCC applies different height parameters to those used by PES – see further, below.

2: PES Study

2.1 Introduction

2.1.1 A broad review of this document has been undertaken looking specifically at the methodology employed and key findings. This review has highlighted both some understandable limitations of the study which are relevant in terms of how the conclusions are used in the 'identification of suitable areas', in the formulation of policy and in decision making, but also some areas of inconsistency and deficiency.

2.2 Study Brief

2.2.1 The brief for the PES study imposed three important limitations on the work:

- Firstly, that the study area was to cover only land within the Northumberland County and to exclude the Northumberland National Park which is a separate planning authority.
- Secondly, it requested that consideration be given only to turbine height and not to the number of turbines within a renewable energy scheme.
- Thirdly, the PES study is a strategic grain sensitivity assessment as acknowledged in paragraph 2.18 of the assessment report.

2.2.2 Whilst these three parameters are, to some extent, understandable in terms of creating a manageable assessment, they are likely to distort and limit the findings of the study. The first runs the risk of the importance and effects on protected landscapes adjacent to the study area being underplayed and to a less than holistic assessment being made. This is particularly important where a protected landscape has a sinuous boundary and may include relatively narrow areas of land which extend out, and are therefore surrounded by, undesignated land or where the character of the landscape extends into the protected landscape such that there is no abrupt change in character between that in the protected landscape and that outside. This is the case with, for instance, LCA's 15a and 18d.

2.2.3 The second limitation on the study is likely to affect the assessment of cumulative effects. This requires consideration of the increasing turbine numbers in the landscape generally and the impact of different size turbines seen in juxtaposition to one another, which is likely to cause visual 'clutter'. Thus cumulative effects can arise even in relation to small scale turbines and notably turbines above 15m, especially where they are viewed from surrounding elevated slopes, where they break the skyline or where they are seen in the context of turbine of a different size. Although the PES study considers capacity and uses it to inform overall judgements on sensitivity, the cumulative effects text for each character type tends to focus on turbine sizes already found within that type. For example for LCT 10 the focus is on

large scale turbines while in reality cumulative effects may also arise from the introduction of smaller size turbines seen in conjunction with existing wind farms.

2.2.4 The third limitation means that local nuances and variations in sensitivity are likely to be missed with local value being underplayed.

2.2.5 The above limitations make the use of sensitivity mapping for defining 'suitable areas' for wind turbine development problematic.

2.3 Methodology and Criteria

2.3.1 Overall the methodology set out in the PES study follows best practice and demonstrates an understanding of the criteria to be taken into account when assessing sensitivity of landscapes to wind farm development. It also details issues and some limitations of the study and highlights factors which are relevant in each landscape. However, a number of broad points are important to make:

- The PES study does not explicitly mention the advice in the PPG which states that “the need for renewable energy does not automatically override environmental protections and the planning concerns of local communities.” This is surprising as the PPG forms an important starting point and backdrop to the work. Whilst the PES study highlights environmental sensitivities the lack of reference to the PPG raises doubt regarding the emphasis placed on protection over need for renewable energy, and thus subsequent judgements on sensitivity and capacity.
- It is noted that the PES study relied, to a significant extent, on ‘desk-based’ research (see paragraph 2.5). While there appears to have been “fieldwork ground truthing”, PES acknowledge that this was limited “as is appropriate to a strategic grain sensitivity assessment.” Considerable reliance has been placed on the County Landscape Character Assessment to make judgements on sensitivity and, as set out in section 4 of this report, there are concerns that local sensitivities may have been missed or underplayed in the assessments as a result.
- Sensitivity assessment takes account of nationally important or designated landscapes but should also take account of undesignated landscapes which are regarded as having high scenic quality even if they have no formal recognition in planning policy. These are referred to as valued landscapes³. The PES study considered qualitative aspects of Landscape Types in relation to scenic quality, distinctiveness and rarity but did not do so, specifically, by

³ The NPPF (July 2018) highlights that 'Planning policies and decisions should contribute to and enhance the natural and local environmental by: a) protecting and enhancing valued landscapes....' (para 170). Valued landscape are known to include nationally designated landscape but also other landscape which may be valued by local communities for a range of different reasons.

reference to landscape areas save in terms of some general comments which do not constitute a detailed understanding of what a local community might regard as a valued landscape.

- On the same theme, landscape character areas and types are used as a framework for assessment purposes. The PES study uses the 2010 landscape character assessment which includes the Outcrop Hills and Escarpments as type 8. The PES study notes the '*significant variety in landscape scale*' across this type and that there is '*significant local variation across the type with multiple combinations of land uses and historic features*'. In such a varied landscape type it is undoubtedly more challenging to articulate the inherent sensitivity to wind farm development as each character area will have specific sensitivities which are difficult to articulate in the general table (we examine this further in section 4 below).
- It is recognised that character does not change abruptly between areas or types and that, in a similar vein, differences in sensitivity classification will not abruptly change between one area or another either. The sensitivity mapping in the PES study does not therefore reflect local nuances or variations in sensitivity articulated in the written text nor does it directly define 'suitable areas' for wind turbine development.
- Adjoining character areas may have different sensitivity ratings, but in reality the sensitivity varies within areas as well as transitioning between adjacent areas rather than changing abruptly.

2.3.2 These points are important to bear in mind when a sensitivity assessment is being used to inform the identification of 'suitable areas' for wind turbine development.

2.4 Capacity

2.4.1 Paragraph 2.4 of the PES study distinguishes between sensitivity and capacity highlighting issues with capacity and implied thresholds. Importantly it highlights that the sensitivity assessment does not identify thresholds but these should be considered in terms of policy and need for renewable energy. The implication is that determining thresholds for development is beyond the scope of the sensitivity assessment but should be determined by the LPA when also taking account of other environmental factors (refer to paragraphs 1.29 and 2.4 of the PES study). Therefore, PES accept that the identification of 'suitable areas' cannot be based on an understanding of sensitivity alone but consideration must also be given to the capacity of the landscape to accommodate further development. This leads us to consideration of the NCC Technical Document.

3: NCC Technical Document and Local Plan Policy

3.1 The Technical Document

- 3.1.1 NCC prepared a technical document in support of their Local Plan which provided a high-level assessment to inform the identification of 'suitable areas' for wind energy development in accordance with the NPPF and WMS.
- 3.1.2 It set out a range of considerations (detailed in table 3.2 of the report) including guidance related to health and safety and health and wellbeing in relation to wind energy development as well as statutory environmental designations including biodiversity and historic environment. The results of the PES study on landscape sensitivity were also considered.
- 3.1.3 The Technical Document made no separate reference to nationally designated or other valued landscapes on the basis that they had been taken-into-account in the PES study (refer paragraph 4.7 of Technical Document). However, as a high-level, strategic assessment and in the context of considering the identification of 'suitable areas', other statutory environmental considerations such as national, regional/local landscape designations/value, in our opinion, should be identified separately. In fact, the PES study did not examine the special qualities of the relevant protected landscapes and the effect of turbine development on them explicitly in terms of the purposes of designation. Nor did the PES study consider past studies on locally valued landscapes which demonstrate consensus regarding value. [While inter-visibility issues were highlighted in the PES study, the extent to which consideration was given to important viewpoints, or the scenic qualities arising from the inter-relationship of different landscape types, is unclear.
- 3.1.4 It is noted that Figure 4.1d should refer to medium to large turbines and Figure 4.1.e to large turbines to tally with the findings of the PES study.
- 3.1.5 The Technical Document was prepared as a desk top exercise only with no fieldwork to check the conclusions being reached in terms of mapped areas. This points to an over reliance on the PES mapping to determine suitable areas with less consideration of the detailed commentary and analysis in the PES study which highlights particular issues or any fieldwork verification. Neither does the Technical Document indicate any consideration of the views of local communities.

3.2 Mapping of 'Suitable Areas'

- 3.2.1 The on-line interactive mapping shows three categories of wind turbine development namely up to 25m, 25m-40m and over 40m. It is not clear why these size categories have been chosen but they differ from those within the PES study making cross reference more difficult.

- 3.2.2 Similarly, no opportunity to overlay landscape character areas or types is afforded in the interactive mapping again making consideration of the 'suitable areas' in the context of the PES analysis, difficult.
- 3.2.3 The maps show large swathes of Northumberland as suitable for wind farm development but also show other white areas which are unsuitable for all sizes of turbine development. In particular two large areas of white include: (1) the landscape adjacent to the coastal AONB and the, AONB itself, and (2) the area of the Tyne Gap and Hadrian's Wall. No explanation is given for these white areas. If they are intended to reflect the sensitivity of protected landscapes then this appears inconsistent in that a similar approach is not adopted for areas close to the National Park such as the Cheviot Fringe and Simonside Hills or areas previously identified as having high landscape value such as the Kylee Hills and Glendale Valley. This is considered in more detail in section 4 in relation to character areas 6a Whittingham Vale, 8b Kylee and Chillingham Hills, 8c Charlton Ridge, 8d Beanley Moor, 10a Rosebrough Moor, 12a Breamish Vale and 15a Lilburn and Roddam, all of which were previously designated Areas of High Landscape Value.
- 3.2.4 Furthermore, the interactive mapping includes areas for turbines less than 15m. However, turbines of this size or smaller do not usually require planning permission as they are covered under the GPDO and therefore mapping suitable areas for this type of development seems unnecessary.
- 3.2.5 In relation to turbines which are 40m+ the Technical Document, having undertaken its own mapping, concluded in paras 5.5-5.6 that:

'Based on the methodology used in this study, there are planning and environmental considerations and designations that rule out large areas of Northumberland for wind turbine development of these (41-135m height) scales. It is therefore recommended that suitable areas for wind turbines of this scale cannot be identified'. (para 5.6)

- 3.2.6 It goes on to state that (para 5.7):

'It is recommended that consideration is given to identifying the site of the existing permitted developments as suitable for wind turbine development in principle.....proposals could come forward during the plan period to upgrade or repower the existing wind turbines.

- 3.2.7 Therefore the Technical Document, having mapped suitability for 40+ turbines, concludes there are few areas suitable and adopts an 'in-principle' approach for large scale turbines based on existing sites – hence the mapping of suitable areas as part of existing or close to existing sites. This approach is inconsistent with the analysis in the PES study which expressly considers the suitability of these areas for different size turbines and in many cases rules out the possibility of further development. For example, as a general principle the PES study concludes that landscapes with a sensitivity rating of medium-high or high, to a particular turbine size, are likely to be unsuitable for further development of that size (para 4.3). Table 11 of the PES study summaries the sensitivity assessment results and identifies only LCA 36a, 39a, 30c

and 41a as the LCTs with a lower rating (i.e. medium or less) to large (100m+) turbines. However, even if one was to take the view that further development of existing wind farms could include turbines of smaller sizes down to 41m, it is noted in the PES study that the combination of turbines of differing sizes can result in visual confusion and cumulative effects (page 27). The PES study goes on to state in para 4.14 that:

“when repowering proposals arise, development which seeks to maintain the scale of the existing turbine or array is likely to be appropriate. However, where landscape and visual effects of operational medium, medium-large or large turbines in particular are considered to be significant, or where re-powering with larger turbines could result in significant landscape or visual effects, re-powering may be inappropriate”

- 3.2.8 The Wandylaw and Middlemoor wind farms are interesting to consider in this regard. An earlier study undertaken by PES⁴ which reviewed the current effects of wind farm development compared to those predicted, revealed that for these wind farms the effects had been underplayed' (para 6.2.8 and 6.3.17), with particular under assessment of cumulative effects (paras 6.2.18 and 6.3.20). On this basis it would seem improbable that further development of this site would be suitable.
- 3.2.9 The Wandylaw and Middlemoor wind farm serves to illustrate the inconsistencies between the PES study and the NCC 'suitable areas' mapping. The NCC mapping appears to include areas as suitable for wind farm development which the PES study expressly notes as unsuitable. This is considered further in section 4.

3.3 Valued Landscapes

- 3.3.1 Table 3.2 of and Appendix A to the Technical Document set out the “The considerations mapped in this study...[while acknowledging that] there are factors not covered.....that will influence.....suitability of locations.....for wind turbine development”. Nowhere in either Table 3.2 nor in Appendix A is the value of a particular landscape mentioned. Neither refers to the National Park, AONB, Heritage Coast, World Heritage Site or Areas of High Landscape Value (AHLV⁵).
- 3.3.2 In para 4.7 of the Technical Document, passing reference is made to National Parks, AONBs and AHLVs and other landscape designations, but it is not clear if these have been used in the GIS to influence the identification or extent of areas suitable/not suitable for wind farm development. As they were not included in Table 3.2. or Appendix A, it is assumed that they have not formed part of the desk top mapping exercise. Conversely under natural and cultural heritage, Table 3.2. lists designations at a Regional and Local level e.g. Conservation Areas (though Eglington’s designation as such appears to have been discounted – see section 4.

⁴ Assessment of the Extent to which Existing Onshore Wind Developments in Northumberland Have Been Successfully Accommodated into the Landscape, May 2015, The Planning & Environment Studio and Bayou Bluenvirobmental.

⁵ AHLV are local landscape designations which were previously included in Local Plans prior to the creation of the Northumberland Unitary Authority. Although policy associated with these areas has been dropped the scenic quality of these areas, which was noted previously, remain.

of this report), CWS and ancient woodland. Consequently, there appears to be an inconsistency in the extent to which existing environmental designations have been applied to inform the definition of 'suitable areas' at a strategic scale.

- 3.3.3 The Technical Document relies on the PES study to take account of landscape designations and value. However nowhere in the PES study is there reference to previous AHLV designations and its para 4.19 states that “the study only considers factors which affect landscape character; other considerations will be taken into account by the County Council in determining overall suitability, such asenvironmental assets valued at the community or local level” [emphasis added]. Para 4.16 of the PES study also highlights the need to consider valued landscapes including setting of national landscape designations, albeit in relation to specific applications, stating that these factors need to be addressed “in more detail than in a county-wide sensitivity study of this kind”. This highlights that the authors of the PES study felt the sensitivity assessment could not fully integrate valued landscapes. The Council therefore cannot rely on the PES study to have thoroughly taken into account the qualities and sensitivities that underpin valued landscapes.
- 3.3.4 Looking more closely at the PES study and its consideration of scenic quality it defines this on page 22 as the natural beauty and natural or ornamental (designed) scenic quality of the landscape, whether designated or not. It considers condition, physical state and visual functional intactness. Consideration is given to the special qualities of existing national landscape designations and their integrity. However, natural beauty and the evaluation of landscape for designation considers a number of factors which contribute to designation including landscape quality (condition/intactness), scenic quality (pleasing patterns and compositions), tranquillity and wildness, natural and cultural heritage interest. These are set out in Natural England's Guidance⁶ and Guidelines on Landscape and Visual Impact Assessment (GLIVIA 3rd edition). Collectively these factors help determine an area's value.
- 3.3.5 Much of Northumberland was previously recognised for its scenic quality and was designated as locally valued (AHLV) in previous local plans as noted above. Furthermore, the natural beauty of a landscape is often derived from the relationship and juxtaposition of landscape of differing types so assessment of scenic quality based on individual landscape types in isolation, can often mask these qualities. This is considered further in section 4.

3.4 Observations

- 3.4.1 In relation to large scale turbine development two important observations can be made regarding the Technical Document conclusions and subsequent mapping:

⁶ Natural England Guidance on Assessing Landscapes for Designation (March 2011)

- Firstly, the study which reviewed the accommodation of existing wind farm sites⁷ indicated that some, notably those at Wandylaw/Middlemoor, have a wider and more significant adverse effect that was originally predicted. This raises questions as to whether it is desirable to accept further development or the automatic repowering of existing wind farms.
- Secondly, cumulative effects become increasingly relevant as the number of wind farm developments increases or existing wind farms expand in specific areas. There are inevitably limits on the extent to which wind farm development can be accommodated in areas where development already exists.

3.4.2 In relation to smaller scale wind turbine development, the Technical Document concludes that large areas across Northumberland could be suitable for turbines up to 25m and between 25-40m in height and that this therefore means suitable areas for wind turbines of this scale could be identified. NCC's brief to PES also suggested that: "If suitable areas are not identified, it would, in the context of the Written Ministerial statement, limit opportunities for community-led initiatives and proposals of a smaller-scale that would help individual homes and businesses to meet their energy needs." However, these suggestions ignore a number of salient factors:

- The GPDO's deemed consent for wind turbines of up to 15m in height, combined with the scope for Neighbourhood Plans to 'identify suitable areas' would appear to address the expressed concerns regarding "community-led initiatives and proposals of a smaller-scale that would help individual homes and businesses to meet their energy needs."
- Turbines between 15m - 40m tall turbines would, in many rural landscapes, give rise to adverse effects due to their individual size but also in relation to cumulative effects, especially when viewed from surrounding higher land.
- Many of the landscapes identified as 'suitable' are potentially highly valued, and qualify as valued landscape in NPPF terms.
- An approach reliant on the mapping of suitable areas combined with policy criteria is potentially confusing and contradictory. It runs the risk of identifying areas as acceptable 'in principle' when in fact the PES study may have identified concerns or even if it did not, may be unsuitable when considered in detail in the field.
- Problems are likely to arise in the context of individual proposals were NCC or local communities seek to rely on the policy criteria to demonstrate that environmental issues cannot be adequately addressed and that proposals are unacceptable. The 'identification' of 'suitable areas' runs the risk of exposing

⁷ *Assessment of the Extent to which Existing Onshore Wind Developments in Northumberland Have Been Successfully Accommodated into the Landscape*, May 2015, The Planning & Environment Studio and Bayou Bluenvirobmental.

the County's landscapes to a lower level of protection in the context of wind turbine development compared to other forms of renewable energy. This is contrary to the thrust of central government's policy in relation to on-shore wind turbines.

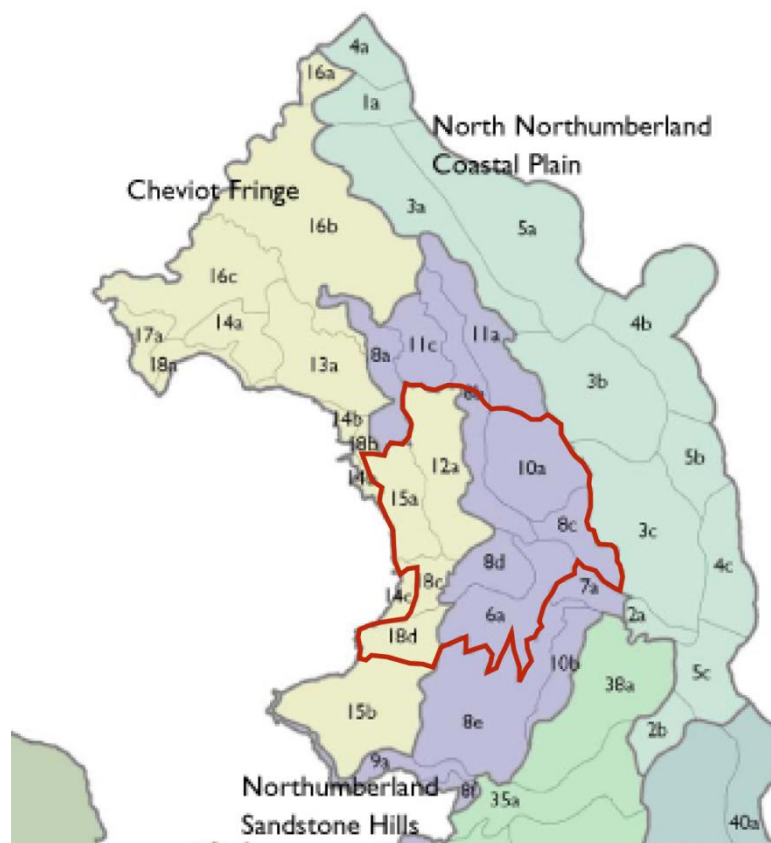
- In relation to all renewable energy development, the role of a criteria-based approach is critical when needing to ensure good design and siting as well as addressing cumulative effects, but for the WMS of 18th June 2015, NCC seems to have conceded the superiority of that approach in the specific context of Northumberland. Given the clear risk that 'identifying suitable areas' will undermine the application of those criteria by enabling developers to argue that many of the criteria have already been met, at least in principle, the 'identification' approach, in our opinion, is misguided, especially given the scope for GPDO-permitted wind turbines and the prospective role of Neighbourhood Plans (see above).

3.4.3 As a result of this review we believe that the 'identification' process appears flawed and at best unclear for the reasons explained above. In order to ensure an appropriate approach to encouraging renewable energy, whilst protecting environmental assets and the interests of communities, we advise that the local plan should stop short of mapping areas of suitability. Instead it should leave the identification of 'suitable areas' for wind turbine development to Neighbourhood Plans (which would adopt a more detailed approach taking into account the views of locally affected communities) and place reliance on the criteria-based approach set out in the policies which would require further local assessment including evidence in relation to valued landscape.

4: Practical Application

4.1 Introduction

- 4.1.1 This section considers a number of specific landscape character areas in terms of their proposed 'suitability for wind turbines'. It highlights the strategic importance and value of specific landscapes and some of the difficulties in accommodating wind turbines mapped as 'suitable' in the NCC mapping.
- 4.1.2 The character areas which are considered in more detail are LCA 6a, 8b, c and d, 10a, 12a, 15a, 18c and d. These are mapped below and form a band of landscape between the Northumberland National Park and the Sandstone Hills in the east. Consideration is given to the character and quality of this area and to the sensitivities of the landscape including value, local variations in character, inter-visibility and cumulative effects with the Wandylaw and Middlemoor wind farms.

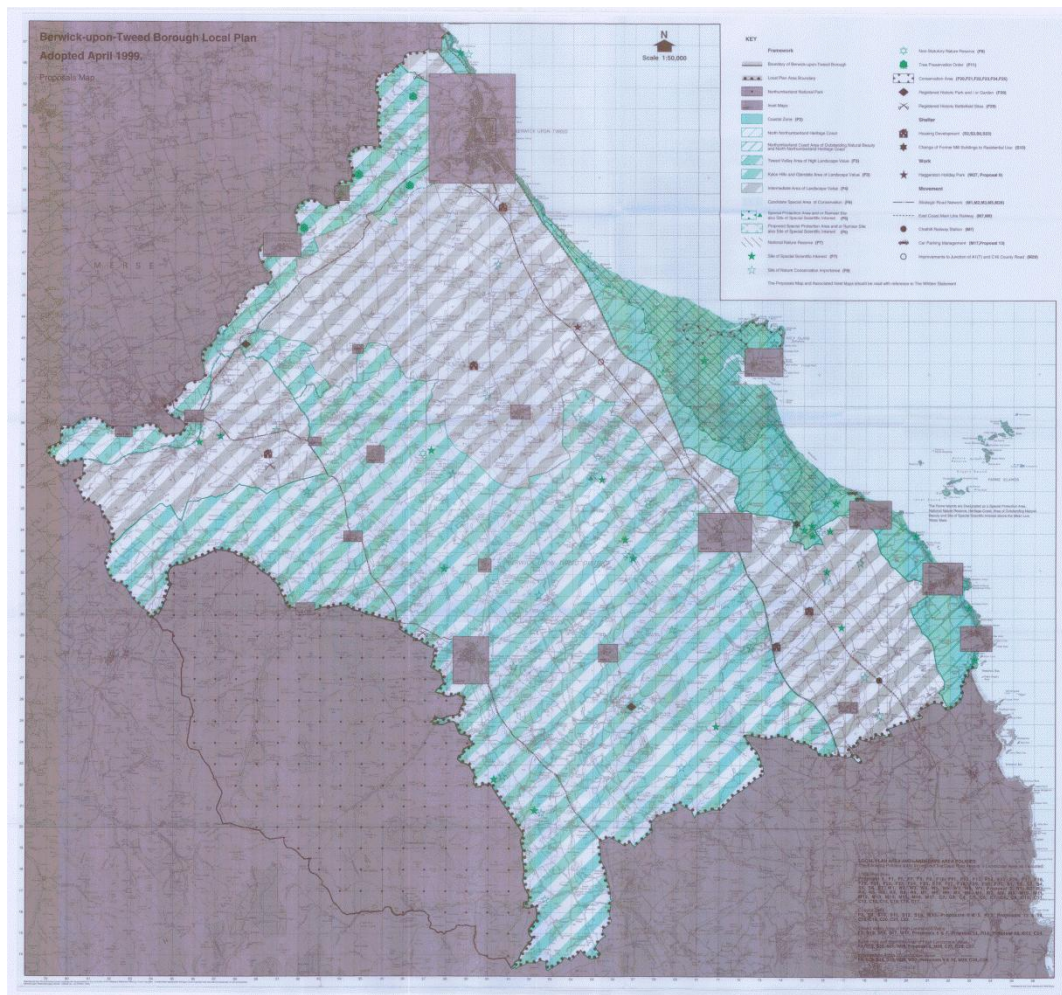


Extract taken from the 2010 LCA for Northumberland (red area indicates landscapes considered)

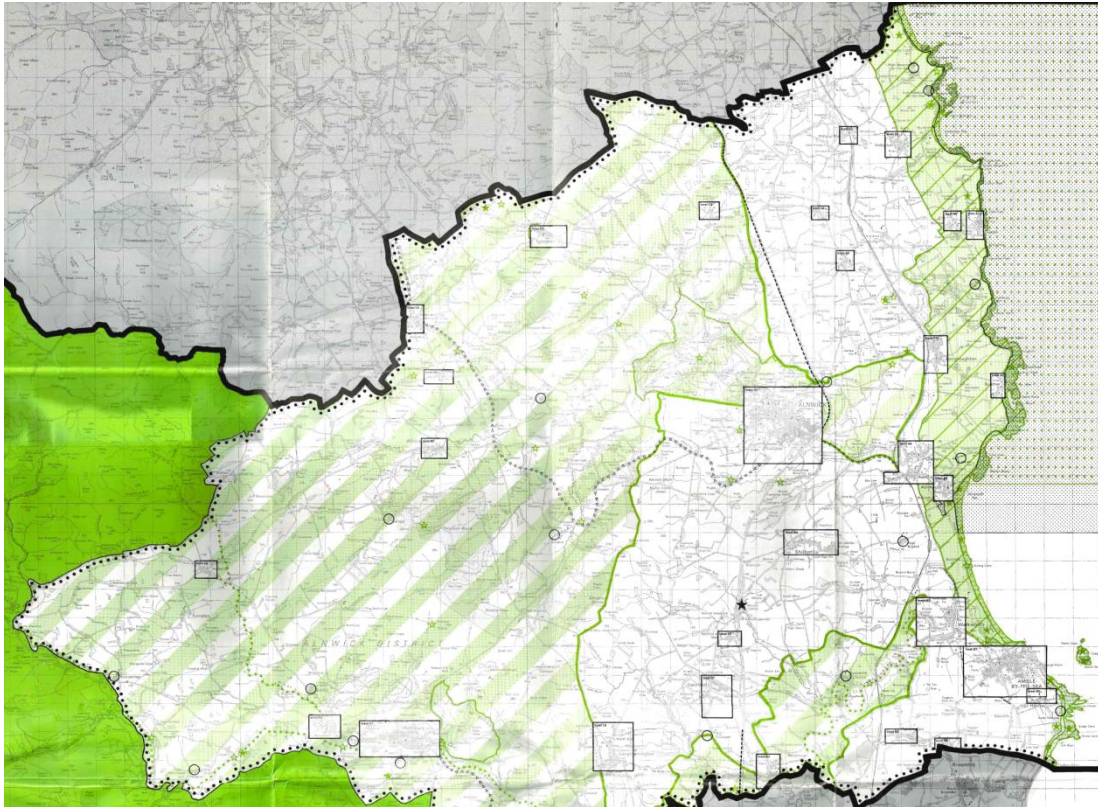
- 4.1.3 Information is drawn from existing landscape character assessments, the PES study and NCC mapping as well as site assessment.

4.2 Landscape Value

- 4.2.1 Strategically the land between the Northumberland National Park (Cheviots) and the Sandstone Hills in the east has long been considered as an area of high landscape value and defined as such in the former Berwick upon Tweed and Alnwick Local Plans (refer to plan extracts below). The Berwick-upon-Tweed Local Plan noted the Kylee Hills and Glendale and in particular the mixed moorland fell sandstone ridges, particularly Ros Castle and the Kylee-Chillingham ridge and the Cheviot hills as contributing to a 'landscape of considerable drama and dynamism'. The Alnwick Local Plan stated that the Local Plan 'identified the principle river valleys, the upland/moorland area, parklands and takes account of other features such as tree cover, hedgerows, water and historic features in designating the area of High Landscape Value, which is considered to be of county significance'. Importantly, the coastal landscapes east of the A1 and outside of the existing AONB (Type 3) were not considered to have the same qualities and were not designated AHLV.



Extract from Berick-upon-Tweed District Local Plan (adopted April 1999) Blue hatch reflects AHLV.



Extract from Alnwick District Local Plan (Adopted April 1997). Hatched areas reflects AHLV.

- 4.2.2 Despite this past consensus on scenic quality and landscape value, the PES study appears to reach a different conclusion. The scenic quality of landscape Type 8 (Outcrop Hills and Escarpments) is considered to be only moderate (text under 'landscape character context' noting that the scenic value is higher in places), whereas Type 3 (Farmed Coastal Plain) is considered to have scenic quality which is moderate-high to high. Whilst this might be attributed to the coastal strip which is designated as AONB, the majority of the area is inland from this. Furthermore, text under 'scenic quality' appears to contradict the judgement on scenic quality noting that Type 3 has 'limited landscape value'. Similarly, the text under 'landscape character context' describes Type 3 as *'relatively unremarkable with widespread intensive arable agriculture, modest topographic interest and heritage sites with relatively low landscape prominence'* all of which would point to a lower scenic quality. Significantly NCC goes on to map the coastal landscapes as unsuitable for wind farm development while mapping the inland landscapes (8b, 8c and 8d, 10a, 12a, 15a, 18c and 18d) as 'suitable' for wind turbines up to 40m in height or less, despite their greater scenic quality (and therefore sensitivity) and arguably their equally important strategic role in providing a setting to another national landscape designation - the National Park.

4.3 Landscape Character

- 4.3.1 Whilst local landscape designations have been dropped from local plan policy, the National Character Areas which cover the landscape in question include NCA 2 Northumberland Sandstone Hills and NCA 3 Cheviot Fringe. Because these character areas are relatively broad brush they consider the inter-relationships

between areas and given the topography of the area and inter-visibility this is important. In particular NCA 2 highlights that *'the sandstone hills encircle the lowland plains of the Cheviot Fringe to the west, separating them from the lowlands of the North Northumberland Coastal Plain....the hills provide panoramic views of the Cheviots to the west, the coasts to the east and Scotland to the north and form the backdrop to views inland from the coast'* (page 5). It goes on to state that:

'this area, with its sparse settlement, slow change and cultural continuity is perceived as very tranquil, valued for its open vistas and dark night skies'

'one of the greatest challenges will be increasing the provision of renewable energy while preserving the open vistas and distinctive skylines'.

- 4.3.2 In relation to NCA 3 the area is described as the lowland between the Cheviots and Sandstone Hills comprising a patchwork of farmland, 18th and 19th century parkland and houses and large estates which form the backbone to farming in the area. Page 34 notes that *'the contrast between the undulating and open landscape of this area and the surrounding hills, is key to the character of this NCA'*.
- 4.3.3 The landscape character assessment undertaken for Northumberland County in 2010 (on which the PES study based its analysis) subdivides the landscape into more detailed character types and areas. Importantly it separates Type 10 (Smooth Moorland) from the sandstones hills landscape Type 8. The description for Type 8 acknowledges that the scarp is associated with a dip slope: *'Beyond the scarp, the flat tops of the ridges form a broad plateau above the gentler, rounded dip slope to the south. In these latter areas there are fewer distinctive rocky outcrop features, although the vegetation continues to reflect the acidic nature of the underlying geology'*. Type 10 also forms a dip slope to the sandstone hills albeit an eastern dip slope.
- 4.3.4 For Type 10 neither the LCA (2010) or the PES Study records views westwards towards the Cheviots although these views exist from the western fringes of the area where there is higher land e.g. Eglington Moor. The open heather moorland in Type 10 is described in the PES study as *'upland heath and blanket bog occupying large areas, giving the impression of an amorphous landscape of continuous heather coverage'*. In contrast the description given for Type 8 states *'While not remote, the semi-natural vegetation and rocky outcrops, which are features of the hills, give a ruggedness and natural character to much of the area. The simple landform and complex semi-natural vegetation patterns provide a rich visual diversity of colours and textures'*. This latter description could equally apply to Type 10. Type 10 is concluded in Landscape Character Context as having limited inherent scenic character, but this seems questionable particularly in the west where it is associated with Type 8, has long distance views and notable intact areas of semi natural vegetation. Furthermore, the study which reviewed the accommodation of existing wind farm sites⁸ noted that the area containing the Wandylaw and Middlemoor wind

⁸ *Assessment of the Extent to which Existing Onshore Wind Developments in Northumberland Have Been Successfully Accommodated into the Landscape*, May 2015, The Planning & Environment Studio and Bayou Bluenvironmental.

farms was classed as having high landscape value (paras 6.2.14 and paras 6.3.13). So the PES study appears to be at odds with the landscape assessment underpinning the old Berwick and Alnwick District local plans and with PES' own 2015 study.

- 4.3.5 In addition, Type 8 is noted for its historic sites especially hill forts of which there are a number in 8b but they are not mentioned in Type 10 despite the landscape forming an important setting to these monuments which often have 360 degree views e.g. Ros Castle and Old Bewick. Furthermore other designated heritage assets are not mentioned such as Eglington Conservation Area which sits within 8b adjacent to 10a. Turbines of any size are unlikely to be satisfactorily accommodated within this designated historic asset and are equally likely to give rise to adverse effects within its setting. It is surprising therefore that the village of Eglington, does not appear as a white area on the NCC mapping given that it is a data set used to inform the mapping of 'suitable areas'.
- 4.3.6 Similar issues arise for Type 12 (Broad Farmed Vale) and Type 6 (Broad Sandstone Valley). The former comprises the lower lying landscape between the Cheviots and Sandstone Hills. The PES study correctly acknowledges scenic value associated with parkland landscapes and dramatic views to the Cheviots although the prominent landforms of Bewick Hill and Ros Castle are surprisingly not mentioned.
- 4.3.7 What this serves to illustrate is that the 2010 LCA for Northumberland separated areas of landscape in its classification which are, in reality, closely linked, and failed to articulate the important inter-relationships between landscapes for example 8b and 10a. The PES study relied on the LCA (2010), such that where the LCA fails to mention something, the PES does not mention it either (perhaps reflecting the predominately desk based approach of the PES study). There are places where the LCA and PES study do not take account of the important inter-relationships between landscapes which increase their inherent sensitivity (despite the methodology highlighting the need to do this under 'landscape character context'⁹). These inter-relationships are important because they give rise to scenic qualities as noted in the previous AHLV designation and increase sensitivity to wind farm development.

4.4 Sensitivity

- 4.4.1 Taking a closer look at the conclusions on the sensitivity of landscape types 8, 10 and 12 to accommodate wind turbines as set out in the PES study, PES conclude that 10a could accommodate turbines of all sizes where it can be shown that effects on the most sensitive characteristics and cumulative effects would not be significant. However given the inter-visibility with existing large scale turbines this landscape is unlikely to be able to accommodate turbines of smaller sizes due to cumulative

⁹ Within the PES study the section on 'Landscape Character Context' articulates *'the role of adjacent character types in contributing to overall character and scenic quality....consideration of containment, backdrop and skylines, the experience of scale and degree of complexity, inter-visibility and vegetation patterns, and the importance of setting of landscapes recognised for their scenic quality. Landscapes types that are close juxtaposed and contrast strongly with adjacent landscapes...and areas that form part of the setting of sensitive landscapes, are likely to be especially sensitive'*

effects and visual clutter when seen in association with the existing wind farms. In terms of turbines of the same size the assessment notes the need to concentrate turbines rather than expanding wind farm sites, but given the inter-visibility of this landscape with adjoining areas (including those designated and/or locally valued), and its relatively small extent, it is unlikely to be able to accommodate additional turbines without expansion being perceived from one direction or another. Given the area's association with Type 8 and important archaeology, it is considered that this landscape is constrained and highly sensitive. It is surprising therefore to see the NCC mapping of suitability to wind farm development as indicating the area as suitable for large scale and medium scale turbine development, neither of which is likely to be achievable without giving rise to significant effects for one reason or another.

- 4.4.2 For area 12 the study highlights that medium and large scale turbines would significantly affect this landscape but that turbines less than 40 may be accommodated and that turbines between 40-65m may be possible to accommodate where effects would not be significant. Furthermore it indicates a 'threshold' in terms of quantity of turbines under 'Landscape Character Context' stating '*development should be limited to a few individual or small groups of small or medium sized turbines*'. However views from higher ground such as from 8c and 8b look out across the distinctive field patterns found in this landscape towards the unmistakable skyline of the Cheviots and rocky scarps of the sandstone hills. Even a few turbines between 65-25m are likely to appear prominent in a landscape that otherwise has no overt incongruous features, where views are from elevated areas and where patterns are visually pleasing and unspoilt. Similar issues arise in relation to area 6a (Whittingham Vale) which is overlooked from surrounding higher land and where small-medium and medium scale turbines are likely to be visually prominent from mid slopes.

4.5 Conclusions

- 4.5.1 While section 4 of this review deals with some specific LCA's, by way of example, we believe that the concerns arising and as identified elsewhere in this report serve to cast serious doubt on the identification of other areas identified by NCC as suitable for wind turbine development. This review illustrates that the sensitivity issues relating to different landscape types and areas is complex and often inter-related with adjoining areas. In this context the 'simple' mapping of suitable areas is misleading as to the ability of the landscape to successfully accommodate further wind turbines in reality. Leaving aside the risk that 'identification in principle' would undermine policy criteria otherwise applicable, proposals to introduce turbines of a range of sizes in the areas discussed would be likely to face significant hurdles in relation to those policy criteria, such that ultimately they would be dismissed. The mapping of the areas as suitable therefore is misleading and confusing and is likely to result in prolonged uncertainty for developers and local communities.
- 4.5.2 This analysis demonstrates the complexity in accommodating wind turbines. Mapping suitability can result in a misleading presentation of a landscapes ability to

accommodate such development. The criteria based approach however, along with detailed and specific local assessment could allow proposals to come forward and to be tested against environmental sensitivities.

5: Conclusions and Recommendations

5.1 Key Recommendations

- 5.1.1 This brief review has highlighted the difficulties in applying sensitivity assessment to the definition of areas as 'suitable' for various sizes of wind turbine. Sensitivity, capacity and suitability are different things.
- 5.1.2 The mapping of sensitivity based on character areas and types presents a broad brush and simplistic impression of the issues to be taken into account. In reality variations in sensitivity occur across character areas and types and transition from one area into adjoining areas. For these reasons it is important that the mapping in the PES assessment, insofar as it can be relied upon, is not separated from the detailed commentary within the report. In determining 'suitable areas' for wind turbine development detailed assessment is required and can be most effectively achieved through neighbourhood planning drawing on locally detailed, as opposed to strategic grain, assessment and assessment of individual schemes.
- 5.1.3 The PPG indicates that identifying areas as suitable for wind farm development should not override other environmental policies. For this reason environmental policies relating to natural, cultural heritage and national landscape designations should remain paramount as should the local value of specific landscapes. This further strengthens the need to avoid identifying suitable areas for turbine development which is likely to affect, cumulatively or otherwise the National Park and/or the AONBs and locally valued landscapes. Any further studies should give the issues affecting the National Park greater prominence in decision making and is especially relevant to Northumberland National Park due to its shape and vulnerability to development beyond its boundaries, as well as the scale of wind farm development which has already occurred within its setting.
- 5.1.4 Although Local Plan Policy REN2 highlights that areas identified as suitable are only to be regarded as such in principle and that policy criteria also need to be satisfied, there is an obvious overlap between the matters ostensibly taken-into-account in the 'identification' exercise and the criteria to be applied through policy REN 1 and 2. That in itself creates a risk of those criteria being undermined. This is unsatisfactory where the 'identification' exercise is deficient in the ways explained and, in any event, heightens the importance of taking-into-account and reflecting the views and concerns of the affected communities.
- 5.1.5 Although it could be argued that inconsistencies and inadequacies of mapping can be addressed through consideration of individual applications and the use of criteria based policies, mapping areas which on closer examination of the facts are likely to be considered unsuitable creates inappropriate uncertainty. NCC has already accepted that the criteria based approach is preferred. It would seem reasonable, based on the issues raised in this report, that reliance is placed on the criteria based

approach, to assist in determining applications as well as further detailed assessment, and that the strategic mapping of suitable areas is not pursued.