



Allerdale Local Plan (Part 1)

Wind Turbine Separation Distance Topic Paper

May 2013



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1 Introduction and scope

23. The UK Renewable Energy Strategy sets a national target to provide 15% of electricity and heat from renewable and low carbon sources by 2020. Renewable energy is an important issue nationally as well as locally across the communities of Allerdale.
24. The overall level of renewable energy currently deployed across Cumbria is 295MW of which 70% is located within Allerdale Local Plan Area. Given the high natural resource much of this energy comes from commercial scale wind with significant proportion also coming from biomass.
25. Allerdale plays a key role in the generation of renewable energy in the region, and will continue to provide energy to meet national targets. Evidence indicates that within the Plan Area there remains a large renewable energy resource, and suggests that there is a realistic modelled potential for an extra 80MW by 2030. This additional supply is likely to come from a mix of technologies, with the onus on micro renewable technologies and commercial wind developments. Given the current number of wind developments and the future deployment, a policy approach has been developed with the Allerdale Local Plan to ensure that the impacts from development (either singular and cumulative) will be acceptable.
26. Consultation on the Allerdale Local Plan Preferred Options revealed a high level of concern from elected members and the community regarding the future wind development, and support for an alternative option to develop separation or setback distance in the emerging Local Plan policy.
27. According with the National Planning Policy Framework (NPPF), Local Plans must be based on evidence and as such the separation distance has been developed using best available evidence from English planning practice and appeals. This document provides further details to support Policy S19 Renewable Energy and Low Carbon Technology and evidence to support the selection of a separation distance within supporting text.

2 National, regional and local policy

28. National energy policy is driven by the effects of climate change and the need to increase the UK's energy mix and ensure energy security by reducing the reliance of imported carbon based sources.

2.1 National

29. The government actively promotes and supports renewable energy developments as part of UK future energy mix. Under the European Renewable Energy Directive (2009) the UK government has legally committed to generating 15 percent of energy from renewable sources by 2020. This target is challenging and provides the context to the Governments on-going promotion of renewable technologies and transition to a low-carbon energy production. Additionally, through the UK's Climate Change Act (2008) the government has set a legal target to reduce green house gas emissions by 34%, compared to 1990 levels, by 2020 and 80 percent by 2050. The Government suggests that renewables will have a crucial role to play in the UK energy mix and the success of these targets. Thus far renewable energy produced from wind turbines have played the most important role in contributing towards achieving these targets, and it is predicted they will continue to do so.

30. National planning policy on renewable energy development takes a very positive stance and clearly states that local authorities must take the same positive approach towards renewable and low-carbon energy developments.

31. Planning policy in the National Planning Policy Framework was published in March 2012 and places sustainable development at the centre of plan making and decision taking. The Framework establishes the encouragement of renewable energy as part of one of the twelve core principles of the planning system (*para 17*). Additionally it is stated in chapter 10 'Meeting the challenge of climate change, flooding and coastal change' that;

"Planning plays a key role in [...] supporting the delivery of renewable and low carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development." (para 93)

32. And;

"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." (para 97)

33. Furthermore, the NPPF goes on to state that Local Planning Authorities 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 impacts;*
 - *consider identifying suitable areas for renewable and low carbon energy sources” (para 97)*

2.2 Regional

34. The Government announced its intention to delete the Northwest Regional Spatial Strategy (RSS) in July 2010. On 24 April 2013 the Secretary of State confirmed that Parliament will officially revoke the Regional Strategy for the North West, on 20 May 2013.
35. Policy within the RSS as designed to reduce emissions and adapt to climate change. A clear message was conveyed in the renewable policy that was that plans and strategies should seek to promote and encourage, rather than restrict, the use of renewable energy resources. Renewable energy policy provided a number of criteria which are to be taken into account when assessing the acceptability of a renewable energy proposal and additionally the approach set out indicative regional and sub-regional renewable energy generation targets for 2010 and 2020. Within Cumbria the target for 2020 was 292.4MW of installed capacity (of which 256.5MW is to come from large scale commercial onshore wind turbines). With the revocation of the RSS there will be no regional renewable energy target.
36. A number of the Cumbria and Lake District Joint Structure Plan policies were extended by the RSS to provide additional supplement to regional policy. These policies were similarly supportive and promotional towards acceptable renewable energy developments. These are also revoked.
37. A Supplementary Planning Document on wind energy was produced by Cumbria County Council in 2007 to interpret and provide guidance on planning policies dealing with the development of onshore wind turbines and their associated landscape impact. The SPD has been adopted by each of the local authorities in Cumbria (except Barrow) and forms part of each of the council's Local Plan. As much of the document remains valid it is still used as guidance across Cumbria.

2.3 Local

38. There are currently no remaining adopted local policies relating to renewable energy, therefore, national policy directs development.

2.4 Policy conclusions

39. Currently, there is no mention of separation distances in government or planning policy. Government is clear that planning authorities must proactively promote and support renewable energy to ensure that key legal targets are achieved.

3 Renewable energy deployment in Allerdale

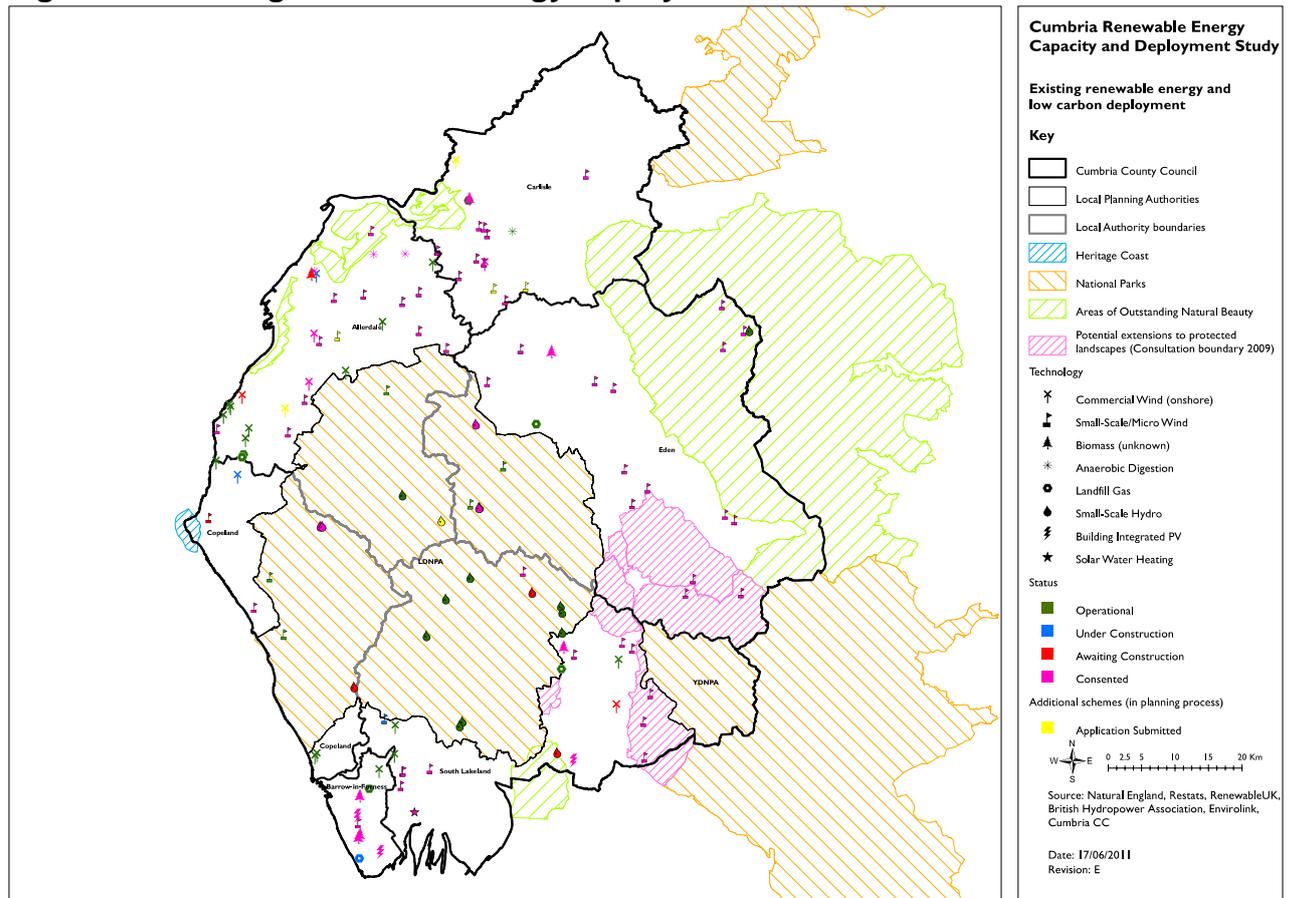
3.1 Cumbria Renewable Energy and Deployment Study

40. The Cumbria Renewable Energy Capacity and Deployment Study (2011) considers the renewable energy potential across Cumbria and provides the evidence to support renewable energy policies within Local Plans. It considers an extensive range of renewable energy sources, translating potential into a realistic deployable capacity up to 2030, in order to help Cumbria to meet Government energy targets.

3.1.2 Results

41. As of April 2011 the overall level of renewable energy currently deployed across Cumbria was 295MW of which 70% (207Mw) is located within Allerdale Local Plan Area. The Study found that Cumbria has a high natural resource for renewable energy. However, as it also has a large number of high quality landscapes and designations, the level of resource that is realistically achievable is significantly reduced.
44. The spatial and technological distribution can be seen in the following figure.

Figure 1 - Existing renewable energy deployment



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File: S:\00005016 Cumbria CC Renewable@ Project Working\GIS\Themer\ArcGDP\5016-01_001_Existing_deployments_RevE.mxd

Source: Cumbria Renewable Energy Capacity and Deployment Report 2011

45. In reaching the overall 'accessible' energy resource the study looked at renewable energy deployment and the potential for each of LPAs across a mix of technology. The study considered various constraints, in addition to modeling resource using a residential separation distance of 600 metres. The detail for Allerdale is presented in the table below.

Figure 2 - Renewable energy resource

	Current Deployment 2011 (MW)	Accessible energy resource (MW)	Modelled deployment 2030 (MW)	Additional Projected Deployment to 230 (MW)
Commercial Wind	88.8	493.5	148.7	59.9
Small Scale Wind	0.4	5.7	1.9	1.5
Plant Biomass	100.0	12.6	101.2	1.2
Energy from Waste	17.9	26.7	18.8	0.8
Small scale hydropower	0.0	2.1	0.2	0.2
Micro generation	0.1	223.4	19.0	18.9
Total	207.0	764.0	290.0	83.0

Source: Cumbria Renewable Energy Capacity and Deployment Report 2011

46. As can be observed current deployment in Allerdale is concentrated in 3 technologies; Wind, Energy from Waste and Plant Biomass. In terms of the available resource the study found there is extensive scope for development of both micro generation and further commercial wind developments, leading to a modelled additional deployment of 19 MW and 60 MW respectively. Given the large number of existing commercial wind developments within Allerdale cumulative impacts will clearly be a key consideration. It is important to bear in mind that the model can only go so far in identifying deployment constraints based on cumulative impacts and each proposal for commercial wind or indeed any energy development must be judged on its own merits in conjunction with existing developments and the landscape setting.

3.2 Updating deployment

47. Since the study was produced (April 2011) development of Allerdale's renewable energy resource has continued. This has mainly come from a range of wind turbine development and to date approximately 4 Mw of additional energy has been approved. Furthermore, a number of applications are at various stages of the planning process, with approximately 6 Mw pending.

4 Allerdale Local Plan

4.1 Key consultation stages

47. Consultation has been central to the production of the Allerdale Local Plan. Throughout the development of the Plan the Council has undertaken an extensive programme of formal and informal engagement and consultation, with communities, key stakeholders and other interested parties.

4.1.1 Issues & Options

48. Public consultation and engagement have underpinned the early stages of the development of the Allerdale Local Plan. Consultations relating to the Issues & Options were undertaken in September - October 2006 and again in July 2009, during an updating exercise. During the two periods of public consultation renewable energy was an important issue across many communities in Allerdale. The consultation revealed a level of support for renewable energy generally; however, it also highlighted a level of opposition and concern regarding increasing levels of commercial wind energy. The key concerns were focussed on the potential negative impacts from wind development, such as amenity and landscape. In addition to a perceived lack of local benefit from production.

4.1.2 Preferred Options - Draft Local Plan

49. During Summer 2012 the Council undertook consultation on the Allerdale Local Plan Preferred Options and understandably renewable energy was a key topic. The Renewable Energy Policy (Appendix 1) set a positive framework for the development of renewable energy across the Plan Area reflecting both national planning policy and local evidence. In order to ensure that only appropriate development takes place, the policy included a criteria based approach to encourage acceptable proposals to come forward to help meet national renewable energy targets. This seeks to address each proposal on its merits, and works in conjunction with other local plan policies to ensure that any impacts are, or can be made acceptable. The policy was developed to address all scale of wind development, and ensures impacts are considered on their own, or in cumulation with other wind and non-wind development.
50. The Local Plan consultation raised over 1,500 individual comments, providing a number of objection to, or support for, policy or strategy. Renewable energy received substantial number of comments (231) including many constructive and useful responses from a range of the community and industry stakeholders. The key message was an

overwhelming concern regarding including a positive renewable energy policy, together with an extensive opposition to further wind development. Furthermore, many representations suggested that an alternative approach (Appendix 1 EC8e) using separation distance was preferred. This approach was also supported during local plan events and by Allerdale Council Members during a subsequent renewable energy workshop.

5 Separation distances in practice

51. The following section provides a summary of different approaches to separation distances that are used or being considered across the UK.

5.1 Government policy

52. At this current point in time government policy does not include separation distances. However, within Parliament there have been three Private Members Bills raised in both the House of Commons and the Lords providing proposals for establishing a legal basis for a separation distance between turbines and residential properties.

Wind Turbines (Minimum Distances from Residential Premises) Bill [House of Lords] 2010-12

Reached a Second Reading in June 2011 the Bill was discontinued and will make no further progress. Made provision for a minimum distance between wind turbines and residential premises according to the size of the wind turbine;

- From 25m and not exceeding 50m 1000m
- From 50m and not exceeding 100m 1500m
- From 100m and not exceeding 150m 2000m
- Greater than 150m 3000m

Onshore Wind Turbines (Proximity of Habitation) Bill [House of Commons] 2010-12

The Bill had its first reading in November 2010 but subsequently failed to complete its passage through Parliament before the end of the session and therefore will make no further progress. It sought to give powers to local authorities to specify in their neighbourhood development plans a 'recommended best practice set-back distance' between onshore wind turbines and habitations. It includes recommendations for this set-back distance, calculated as a multiple of ten turbine rotor diameters.

Wind Turbines (Minimum Distance from Residential Premises) Bill [House of Lords] 2012-13

Re-introduction of the earlier Bill was given its first reading in May 2012.

53. It should be noted that Private Members' Bills are introduced by individual MPs or Lords who are not progressing government business. In practice a small minority of these types of Bills become law, as less

parliamentary time is allocated to these Bills, it is less likely that they will proceed through all the stages. Furthermore, the Bills have no weight in planning decisions as highlighted in a recent appeal, where the inspector stated

“It has been mooted that a private members bill may result in mandatory minimum distances between turbines and dwellings. However at the present time this does not form part of Government policy and whether such measures would be enshrined in legislation is not known. The matter cannot therefore carry weight [.....]”
APP/U2615/A/10/2131105 (November 2010)

5.2 Local Government Association Advice

54. The Local Government Association (LGA) works on behalf of councils and ensures local government has strong, informed dialogue with national government. Part of its role is to support, promote and improve local government and therefore it seeks improvement and innovation by developing and sharing good practice through networks, resources, and peer support. In February 2011 the Local Government Improvement and Development (overseen by LGA) produced a Wind Energy Checklist based on practice. One section deals with “designated areas and approximate setback distances”, within this section, with regards to residential properties and setback distances, the guide states that there should be;

*‘a setback distance of at least 600 – 800 metres from residential properties for large wind turbines. This may be reduced for smaller projects. Other land uses, including non-residential buildings and agriculture, can still be accommodated in this zone’.*¹

55. Although this advice has no real weight in planning decisions, the consideration of setback distance from residential property provides a basis for considering potential policy based on best practice.

5.3 Advice on separation distances for safety

56. With the publication of the NPPF the government consolidated over two-dozen previously issued documents called Planning Policy Statements (PPS) and Planning Policy Guidance Notes (PPG). However, some documents such as the Companion Guide to PPS 22: Renewable Energy remains extant. This provides technical, good practice guidance and although it is recognised that the Government is engaged in a process of revising these types of documents it remains

¹ http://www.local.gov.uk/web/guest/home/-/journal_content/56/10171/3510154/ARTICLE-TEMPLATE

relevant to the assessment of effects of the proposed wind development.

57. The Companion Guide suggests that “properly designed and maintained wind turbines are a safe technology”. It states that “The minimum desirable distance between wind turbines and occupied buildings calculated on the basis of expected noise levels and visual impact will often be greater than that necessary to meet safety requirements. Fall over distance (i.e. the height of the turbine to the tip of the blade) plus 10% is often used as a safe separation distance” (paragraph 51).

5.3.1 Noise

58. Given the statement from PPS 22 Companion Guide above, noise is a key factor in the consideration of separation distance in each development proposal. It suggest that through good design and allowing sufficient distance between the turbines and any existing noise-sensitive development, noise from the turbines will not normally be significant.
59. The recommended good practice comes from ‘The Assessment and Rating of Noise from Wind Farms’ (ETSU-R-97). This provides a framework for the measurement of wind farm noise and gives indicative noise levels calculated to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development. The technical annex of the Companion Guide refers to noise and separation and states that noise limits suggest a minimum separation distance of 350 metres for a typical wind turbine (Table 1 page 156).
60. Despite concerns that ETSU-R-97 is not always being applied in a consistent way, it remains the required guidance to assess the impact of wind development. The Institute of Acoustics are currently developing ‘Good Practice Guidance’ to the application of ETSU-R-97 for wind turbine noise assessments and carried out consultation in Summer 2012. They intend to publish May 2013.

5.3.2 Infrasound

61. Infrasound or ‘low frequency noise’ is often raised as an issue by communities in response to wind farm proposals. The PPS22 Companion Guide asserts that there is ‘no evidence that ground transmitted low frequency noise from wind turbines is at a sufficient level to be harmful to human health’. Again the policy framework is informed by ETSU-R-97 based on a study generated from measurements taken on site and up to 1km away – in a wide range of wind speeds and direction. Furthermore, the World Health Organisation

assessed that there is 'no reliable evidence that infrasound's below the hearing threshold produce physiological and psychological effects' (WHO Community Noise Report).

62. Despite the clarity of national guidance and best practice there are conflicting views on infrasound. Increasingly evidence is being released both in the UK and across the world to suggest that the issue of infrasound is not so clear cut. The *British Medical Journal* recently published an article on wind turbine noise, which stated: "shortly after wind turbines began to be erected close to housing, complaints emerged of adverse effects on health. Sleep disturbance was the main complaint. Such reports have been dismissed as being subjective and anecdotal, but experts contend that the quantity, consistency, and ubiquity of the complaints constitute evidence of a strong link between wind turbine noise, ill health, and disruption of sleep"².
63. Nevertheless, expert opinion is varied and ETSU remains the primary guidance and sets the legal framework that is used to inform planning decisions.

5.3.3 Amplitude Modulation

64. There is also a growing concern regarding amplitude modulation which is caused by excess wind shear, and is often referred to as the "thump" or "swish" noise made by the blades of the turbine. As with infrasound this is frequently cited as the potential cause of health impacts in nearby residential properties. At this current point in time Amplitude Modulation is not fully understood and therefore it is argued that it cannot be predicted, raising doubt about the ability to subsequently protect residential amenity.
65. Although the 1997 ETSU guidelines remain the governments prime guidance on noise, in 2011 the Department of Energy and Climate Change (DECC) commissioned study, *Analysis of How Noise Impacts are Considered in the Determination of Wind Farm Planning Applications* (April 2011). This concluded that updated best practice guidance on noise was required.
66. In relation to amplitude modulation the report states that;
- "there is currently no requirement in ETSU-R-97 to include any correction or penalty for any modulation in the noise and this is reflected in the way this has been dealt with in the assessments studied. This position would need to be re-stated, or otherwise addressed in any best practice guidance, in line with current research and guidance on this issue"* (paragraph 7.8)

² Hanning, Christopher and Evans, Alun (2012) *Wind Turbine Noise*, British Medical Journal

67. And in the reports conclusions it also suggests that;

“it would be appropriate for any best practice guidance to confirm an appropriate way of dealing with wind shear issues as this is fundamental to the assessment procedure”. (paragraph 7.5)

68. Despite these issues the ETSU-R-97 guidance continues to apply and remains the sole consideration until the imminent publication of the Institute of Acoustics ‘Good Practice Guidance’ (May 2013).

5.3.4 Noise conclusions

69. Given the speed of progress in wind energy technology it has been argued that national planning guidance and ETSU guidance have been overtaken, and an update is long overdue.

70. Furthermore, the uncertainty regarding infrasound and amplitude modulation, and the criticisms of guidance, it is considered appropriate to take a precautionary principle and introduce separation distances between turbines and housing as an additional means to protect residential amenity.

5.4 Separation distances across the UK

71. As previously stated there is no separation distance set in English planning policy, however, other devolved nations have adopted planning guidance suggesting that wind development be setback from residential property. In response to increasing numbers of wind development across England, many Local Authorities are developing their own minimum distances between a wind turbine and housing. There are many different examples of practice and approaches undertaken, however, as of yet there are no adopted planning policies in place in England. The table below provides a range of examples to illustrate both the range of distances selected and the ‘status’ of the approach.

Figure 3 - Examples of Guidance on Minimum Separation Distance in Practice (May 2013)

<i>Location authority</i> /	<i>Distance</i>	<i>Details</i>	<i>Policy status</i>
Welsh Assembly	500m	Technical Advice Note 8: Renewable Energy sets out a typical separation distance between turbines and residential property. Flexible approach, and can be refined	Adopted

		by LPA.	
Northern Ireland	10 times rotor diameter, but not less than 500m	Planning Policy Statement: Related to wind farm development proximity to occupied dwellings. Noise related.	Adopted
Cherwell District Council	800m	Informal planning guidance Recommends separation distances between turbines and settlements/dwellings, based on amenity and other issues such as landscape, noise, heritage, safety and shadow flicker.	Adopted 'without status'
Milton Keynes Council	Sliding scale approximately 10 times height	Supplementary Planning Guidance based on noise / safety.	Quashed 'no status' ³
Lincolnshire County Council	700m (2km if there are noise issues)	Wind Energy Position Statement: Distance from residential properties. The county council is not the planning authority.	No Status
Scottish Planning Policy (SPP)	2km	Guidance refers to strategic search areas for wind and relates to settlements	Adopted
Wilshire Council	Sliding scale up to 3km	Policy text within the Wilshire Core Strategy Submission Draft. Sliding scale based on distance from residential property.	No Status (Examination May 2013)
Proposed Lords Bill	Sliding scale up to 3km	Private Members' Bill: Sliding scale based on distance from residential property.	No Status

72. The table above demonstrates that there are many different examples of separation distances in practice based on various planning issues, such as noise, visual, amenity impacts. However, aside from the devolved nations there is no adopted policy with status in the UK. Since 2010 there has been a growing number of Councils adopting policy positions or informal guidance, including many County Councils. Although these 'policies' have limited status it demonstrates that separation distances are considered to be an issue across many areas of England.

³ The Wind Turbines SPD was adopted in July 2012 and subsequently quashed by a High Court judgement in April 2013 <http://www.milton-keynes.gov.uk/planning-policy/displayarticle.asp?ID=84312>

73. Examples of the adoption of planning policy with status in development management decision making are limited, however, recent adoption and subsequent quashing of the Milton Keynes Wind SPD provides useful material in the consideration of separation distances in Allerdale. Although the SPD was revoked after a legal challenge, there have been various interpretations of the judgement from those opposed or in support of separation distances. Given that the case was lost on one of four points⁴ many commentators consider the High Court judgement sets a legal case for separation distances between dwellings and wind turbines. However, the planning and legal case is far from clear and many other experts hold conflicting views.
74. Analysis of the various examples suggests that given that separation distances are to protect amenity impacts it would be best addressed through proximity to residential properties rather than settlements. Additionally a simple approach should be adopted based on best available evidence.

5.5 Planning appeals

75. This section provides a review of relevant appeal decisions from England over recent years. By analysing the appeals, conclusions may be drawn with regards to an appropriate distance that could be used.

⁴ There were four strands to the case brought against the Council, of which the Council won three of the four. The ruling rejected one of the appellant's argument that the council's stance was also unlawful because it conflicted with national renewable energy targets. On the point that was lost it was only on the basis that this Council had already had a separation distance in its current local plan.

Figure 4 - Review of Planning Appeals

<i>PINS Ref.</i>	<i>Year</i>	<i>Location</i>	<i>Distance</i>	<i>Details</i>	<i>Notes and Quotes</i>
APP/D2510/A/1 2/2176754	2013	Lincolnshire	800m	8 turbines (115m)	'The appellants were able to show by reference to other appeal and called-in application decisions that in England, no property 800m or more from a wind farm scheme had been judged to be potentially affected by the visual presence of turbines to the extent that the living conditions of its residents would be unacceptably harmed.'
APP/P2114/A/1 0/2125561	2011	Isle of Wight	900m	3 turbines (125m)	'Given the distance to the nearest dwellings, along with the local topography, I do not consider that there are any special circumstances or factors which would apply here to indicate that both construction and operational noise from the proposed wind farm could not be adequately controlled by the conditions suggested to the Inquiry.'
APP/X2410/A/1 0/2134009	2011	Leicestershire	610 m	1 Turbine (132m)	'The noise assessment indicates that the limit could be comfortably met.'
APP/C1625/A/0 9/2116088	2010	Gloucestershire	400m	1 Turbine (70m)	'Given the distance of the site from the nearest properties, there would be no likelihood of disturbance to local residents from any sounds arising from the movement of wind through the structure''
APP/D2510/A/1 0/2121089	2010	Lincolnshire	700m	8 Turbines (2Mw)	'As to the totality of noise considerations there is no justifiable basis to conclude that this is a factor to be weighed against the project.'
APP/R1038/A/0 9/2107667 And APP/P1045/A/0 9/2108037	2010	Derbyshire	650m	5 Turbines (126m)	'Living conditions would be unacceptably harmed, to varying degrees, by noise and visual impact.'
APP/J1915/A/09 /2104406	2010	Hertfordshire	750m	3 Turbines (119m)	'I conclude on the third issue that neighbouring residents would not suffer unacceptable disturbance from noise or shadow flicker'
APP/M0933/A/0 8/2090274	2009	South Lakeland	600m	6 Turbines (120m)	'I consider that the turbines are unlikely to cause unacceptable noise at nearby dwellings.'
APP/L2630/A/08 /2084443	2008	Norfolk	700m	7 turbines (125m)	A distance of 700m from the nearest residential dwelling was found to be appropriate.
APP/B3030/A/0 8/2072487	2008	Nottinghamshire	800m	5 turbines (100m)	A distance of between 600 and 800m from the nearest residential dwelling was also found to be appropriate.
APP/X2220/A/0	2008	Dover	1km	5 turbines	From the nearest dwelling (360m), the Inspector found that the turbine would be

8/2071880				(125m)	'looming', 'unpleasantly overwhelming', and 'unpleasantly overwhelming and unavoidable' impact extended to dwellings within 800m. At a settlement 1km away from the turbines, the impact too would be dominating and unavoidable.
APP/V3310/A/0 6/2031158	2008	Somerset	440m	5 turbines (120m)	'There is no clear evidence that noise from the turbines, noise related problems or shadow flicker would cause any unacceptable harm to living conditions locally, especially if controlled by appropriate conditions.'
APP/W0530/A/0 5/1190473	2006	Cambridgeshire	800m	16 turbines (100m)	Inspector considered that the impact of the turbines on a settlement 800m away would be significant. The turbines were found to completely dominate the character and appearance of the area, and the appeal was dismissed.

76. It is important to note that this is not an exhaustive overview of appeals. However, a review of appeal decisions in England suggests that there is no general rule applied in relation to distances between turbines and dwellings. The distances which were judged to be acceptable range from 400 to 900 metres, however in another example the inspector concluded that the development located 1km away from a settlement would be 'dominating' and unacceptable. Furthermore, although the magnitude of a turbine has a bearing this is not directly linked to distance. This is demonstrated by analysis of distance based on height multipliers with a range of below 4 to 8 times, and an average of 6. It is considered that rather, a judgement is required to be made according to the individual merits of each case and the local circumstances that justify larger or smaller distances.
77. The limited review of appeal cases outlined in this section can be used to suggest an approximate separation distance, however, any policy or setback distance need to be flexible to reflect the specific circumstances of each case.

6 Allerdale Local Plan Pre – Submission Draft

78. The Allerdale Local Plan sets a positive framework for the development of renewable energy across the Plan Area reflecting both national planning policy and local evidence. As with the 'Preferred Options', in order to ensure that only appropriate development takes place, the policy adopts a criteria based approach to encourage acceptable proposals to come forward. This addresses each proposal on its merits, and works in conjunction with other local plan policies to ensure that any impacts are, or can be made acceptable. The policy has been developed to address all scale of wind development, and ensures impacts are considered on their own, or in cumulation with other wind and non wind development.
79. The inclusion of a setback distance has been driven by members and community concerns that were raised in the previous round of consultation on the Local Plan. Therefore, in order to address concerns and in the interests of residential amenity, the policy sets out a minimum separation distance of 800m between wind turbines (over 25m) and residential properties. The Allerdale Local Plan Pre-Submission Draft - Policy S19 Renewable Energy and Low Carbon Technologies is shown in full in Appendix 2.
80. An indicative map showing the extent of this setback distance is included in Appendix 3.

Appendix 1 – Preferred Option Policy EC8 - Stand Alone Renewable or Low Carbon Technology

Key issues

- *The UK Renewable Energy Strategy seeks around 35% of electricity and heat to come from renewable sources by 2020;*
- *National policy states that plans should promote and encourage, rather than restrict the development of renewable energy;*
- *Evidence suggests that despite considerable current deployment Allerdale has a significant capacity for renewable energy;*
- *Consultation revealed a level of community support of renewable energy generally, however there was a level of opposition to commercial wind development.*
- *Given the level of current deployment cumulative impacts are a key concern;*
- *Many respondents were concerned about the negative impacts of wind development as well as the lack of local benefit generated from the developments.*

Introduction

The UK Renewable Energy Strategy seeks around 35% of electricity and heat to come from renewable and low carbon (non nuclear) sources by 2020. Renewable energy is clearly an important issue nationally as well as locally across the communities of Allerdale. National policy is central to the development of the local policy and includes a strong message that we should promote and encourage, rather than restrict, the development of renewable energy sources. Furthermore, development plan policies should not place constraint on the development of renewable energy or specific technologies.

The prescriptive nature of national policy continues stating that planning authorities should recognise the full range of renewable energy sources, their differing characteristics, locational requirements and potential for exploiting them subject to appropriate environmental, landscape and amenity safeguards.

The Cumbria Renewable Energy Capacity and Deployment Study was completed in August 2011 and considers the renewable energy potential across Cumbria to provide the evidence to support Renewable Energy Policies within the Local Planning Authorities Local Plan. It considers an extensive range of renewable energy sources, translating potential into a realistic deployable capacity up to 2030 in order for Cumbria to meet Government energy targets.

The overall level of renewable energy currently deployed across Cumbria is 295MW of which 70% is located within Allerdale. The Study found that Cumbria has a high natural resource for renewable energy (4,542MW), however, as it also has a large number of high quality landscapes and designations the level of resource that is realistically achievable is significantly reduce. The study suggests that once the constraints (environmental, transmission, supply chain, economic viability, and

planning and regulatory constraints) are taken into account Cumbria's renewable energy deployment is likely to be 606MW in 2030.

The study indicates that within Allerdale there is a large resource of renewable developments, and suggests that there is a realistic potential for an extra 80MW by 2030. This additional supply is likely to come from a mix of technologies, with the onus on micro renewable technologies and commercial wind developments. Given the level of current development and the future deployment both cumulative impact and public opinion will be key considerations. The future development of our renewable resource, especially micro generation presents an exciting economic opportunity in terms of job creation, investment and economic diversification and accords well with the aspirations of the Economic Strategy for West Cumbria.

EC8 Preferred Option - Stand Alone Renewable or Low Carbon Technologies

Allerdale Borough Council will seek to promote and encourage the development of stand alone renewable or low carbon energy resources given the significant wider environmental, community and economic benefits. Proposals that have an unacceptable impact, either in isolation or cumulatively will be strongly resisted. In considering proposals the planning authority will take in to account the following criteria:

- Local amenity (air quality/emissions, noise, odour, water pollution) (EN4)
- Location, scale and its visual impact in relation to the character and sensitivity of the surrounding landscape. (NE2)
- Effects on nature conservation features, biodiversity and geodiversity, including sites, habitats and species, avoiding significant adverse effects on sites of international nature conservation (NE3)
- Potential benefits to the local economy and the local community, including any effects on agriculture and other land based industries
- Appropriate operational requirements (including accessibility and suitability of road network, ability to connect to the grid, proximity of any feedstock where relevant)
- Appropriate measures are included for the removal of structures and the restoration of sites, should sites become non-operational

Within the sensitive landscapes of the Hadrians Wall World Heritage Site and the Solway Coast Area of Outstanding Natural Beauty only small scale, stand alone renewable energy schemes, which preserve the special qualities of these designations and accord with Core Strategy Policy NE2, will be supported.

Renewable energy proposals are expected to provide supporting evidence including Landscape, Visual and Environmental Assessments and to demonstrate that any negative impacts can be satisfactorily mitigated. Proposals will be expected to outline and deliver significant benefits to the local community and where necessary this will be secured through Planning Obligations (Policy S4).

Sustainability Appraisal

The preferred policy approach presents the most sustainable approach to consideration of renewable and low carbon generation in the Core Strategy. It scored well across the objectives, but especially in relation to economy, social and some environmental objectives. The alternative policy options performed less well by virtue of them not necessarily supporting renewable energy development in the Borough and therefore not addressing issues related to greenhouse gas emissions and climate change, or relate to the setting of restrictive thresholds and distances that would result in limiting the amount of energy related development coming forward.

Justification for Preferred Option EC8

The preferred option follows government priorities for development of our renewal resources and closely follows national planning policy in supporting and promoting renewable energy generation. Accordingly, the policy adopts a criteria based approach to encourage proposals to come forward to help meet renewable energy targets within Allerdale where they are acceptable. This approach works in conjunction with other Core Strategy policies to ensure the maximum level of resource is harnessed while minimising impact and where required provides mitigation. This approach supports the strategic objectives, Government priorities and Energy Coast ambitions. Also the approach of promoting renewable technologies in suitable locations was broadly supported by stakeholder and community views in earlier consultation. One drawback of the approach could be a perceived lack of protection offered by an encouraging and promotional policy approach, however, the protection and control of developments is included within the policy criteria and other Core Strategy policies.

An additional section of the policy is provided to ensure that within the AONB and heritage setting renewable schemes are in keeping, and of scale to provide minimal impact. This was the preferred option, as although it has the potential to reduce renewable capacity of Allerdale it reflects the importance of the landscape of the AONB and heritage settings and the feelings of many communities with Allerdale. Additionally, this approach conforms with national policy and supports strategic objectives to both generate renewable energy and protect the natural environment.

Compliance with other policies and strategies

Relevant Strategic Objectives	SO3a, SO3b, SO6b, SO6d, SO1c, SO1d, SO3c
National Planning Policy Framework	1 - Building a strong, competitive economy; 3 - Supporting a prosperous rural economy; 10 - Meeting the challenge of climate change, flooding and coastal change; 11 - Conserving and enhancing the natural environment; 12 - Conserving and enhancing the historic environment; Plan Making.

Sustainable Communities Strategy	6.1, 6.2, 6.3, 6.8
Allerdale Council Plan priorities	2
Evidence Base	Cumbria Renewable Energy Capacity and Deployment Study 2011, Draft West Cumbria Economic Blueprint: Realising the Potential of Britain's Energy Coast (2012), Cumbria Landscape Character Assessment, Solway Area of Outstanding Natural Beauty Management Plan 2009 – 2014
Links to Core Strategy Policies	S4, EN2, EN3, EN4
Key Development Management Policies	-

Alternative Policy Options

EC8a No renewable policy.

An alternative approach would be to have no renewable policy in the Core Strategy, relying on national policy and other Core Strategy policies to guide development. This was rejected as it does not reflect the importance of renewable energy to communities and businesses in Allerdale and would not promote national priorities or strategic objectives.

EC8b Adopt a negative policy towards large scale wind

This alternative approach was considered to address the widespread community concerns regarding wind development by providing a clear message in policy. It was rejected as the preferred option as it would be against national policy and likely to fail the Government's 'test of soundness' as the approach is not informed by evidence and therefore would be very unlikely to be implemented. Additionally, the policy would not help promote national priorities or strategic objectives, as it would rely on other technologies to help meet national renewable targets, which is again contrary to the findings of the evidence base.

EC8c Establish 'areas of search' for wind development

This alternative option was also considered. It would provide additional policy material on wind development by establishing areas of search for wind development. Adopting such a policy would effectively assess the Borough and identify those areas that would be appropriate for wind development and establish the potential carrying capacity. This would reflect some local concerns about inappropriate developments in some areas, and provide certainty for developers while reducing their costs and time. This was not considered to be the preferred option as it would require extensive upfront resource implications to provide the evidence to base policy on. The establishment of areas of search would reduce the influence the Council and communities has over individual proposals in designated areas of search for wind. Also it was considered that the approach may not generate community support once areas have been identified and therefore would be difficult to implement.

EC8d Set a renewable energy threshold

This alternative approach would set a threshold for the total allowable renewable energy deployment in Allerdale and therefore protect the Borough from excessive development. In order to set a threshold evidence would be required to justify the figure selected. Calculating our 'fair share' would be complex, and difficult to justify. This approach was rejected because renewable targets set by the Government are not a maximum ceiling for development; they are to provide an aim for policy and a target to be able to monitor progress. Therefore an upper limit for development is unlikely to pass as a 'sound' policy.

EC8e Include specific criteria indicating 'setback' distances from residential developments

Criteria could be developed to protect residential dwellings from commercial wind development close by. This approach was rejected because it would have to be evidence based, and as each potential site varies setting one threshold for the whole of Allerdale would be complex, difficult to justify and open to challenge. In other countries, most notably Scotland include guidance suggesting a greater separation distance from settlements in practice the scale and nature of landscape and developments are different and the setback of 2km is a guide with proposals with the 2km being considered on their own merits. Furthermore, the policy approach preferred has criteria to protect amenity and health on a case-by-case basis and this is considered to be the best method to protect dwellings from potential harm.

EC8f Apply policy uniformly across all Allerdale

This approach adopts a uniform policy for renewables across all of Allerdale and does not differentiate between different degrees of landscape sensitivity. This would provide a simple approach that would rely on other core strategy policies to protect landscape and heritage. This was rejected as the preferred option as it was against community and stakeholder views, and may lead to degradation of important landscapes that have national, European and world protection.

Appendix 2 – Allerdale Local Plan Pre-Submission Draft - Policy S19 Renewable Energy and Low Carbon Technologies

195. The UK Renewable Energy Strategy sets a national target to provide 15% of electricity and heat from renewable and low carbon sources by 2020. Renewable energy is an important issue nationally as well as locally across the communities of Allerdale.
196. The Cumbria Renewable Energy Capacity and Deployment Study (2011) considers the renewable energy potential across Cumbria and provide the evidence to support renewable energy policies within Local Plans. It considers an extensive range of renewable energy sources, translating potential into a realistic deployable capacity up to 2030 in order to help Cumbria to meet Government energy targets.
197. The overall level of renewable energy currently deployed across Cumbria is 295MW of which 70% is located within Allerdale Local Plan Area. The Study found that Cumbria has a high natural resource for renewable energy. However, as it also has a large number of high quality landscapes and designations, the level of resource that is realistically achievable is significantly reduced.
198. The study indicates that within the Plan Area there is also a large renewable energy resource, and suggests that there is a realistic potential for an extra 80MW by 2030. This additional supply is likely to come from a mix of technologies, with the onus on micro renewable technologies and commercial wind developments. Given the current number of wind developments and the future deployment, both singular and cumulative impact will be key considerations. The future development of the renewable resource, especially micro generation presents an exciting economic opportunity in terms of job creation, investment and economic diversification and is well aligned with the aspirations of the West Cumbria Economic Blueprint.

S19 Renewable Energy and Low Carbon Technologies

The Council will seek to promote and encourage the development of renewable and low carbon energy resources given the significant wider environmental, community and economic benefits. Proposals where impacts (either in isolation or cumulatively) are, or can be made acceptable will be permitted.

The Council will take a positive view where;

- a) Proposals (either in isolation or cumulatively);

- i) Do not have an unacceptably adverse impact on the amenity of local residents (such as air quality/emissions, noise, odour, water pollution);
 - ii) Do not have significant adverse impact on the location, in relation to visual impact and impact on the character and sensitivity of the surrounding landscape;
 - iii) Do not have a significant adverse effect on nature conservation features, biodiversity and geodiversity, including Natura 2000 sites, habitats and species;
 - iv) Do not have unacceptably adverse impact on heritage assets and their settings;
- b) In the case of wind turbines, it can be demonstrated that the development would not result in a significant adverse effect (either in isolation or cumulatively) on protected bird species, including designated sites and migration routes;
 - c) Appropriate operational requirements are addressed (including accessibility and suitability of road network, ability to connect to the grid, proximity of any relevant feedstock);
 - d) Appropriate measures are included for the removal of structures and the restoration of sites, should sites become non-operational;
 - e) Potential benefits to the local economy and the local community, including agriculture and other land based industries are considered.

Within Hadrian's Wall World Heritage Site and its buffer zone, and the Solway Coast Area of Outstanding Natural Beauty only small scale renewable energy schemes, which preserve the special qualities of these designations and accord with the aims and objectives of their management plans will be acceptable.

Renewable energy proposals are expected to provide supporting evidence including landscape, visual and environmental assessments and to demonstrate that any negative impacts can be satisfactorily mitigated. Where mitigation is required to make impacts acceptable these will, where necessary be secured through Planning Obligations. Developers will be expected to work with local communities from an early stage and deliver benefits to the local area where the proposal is located.

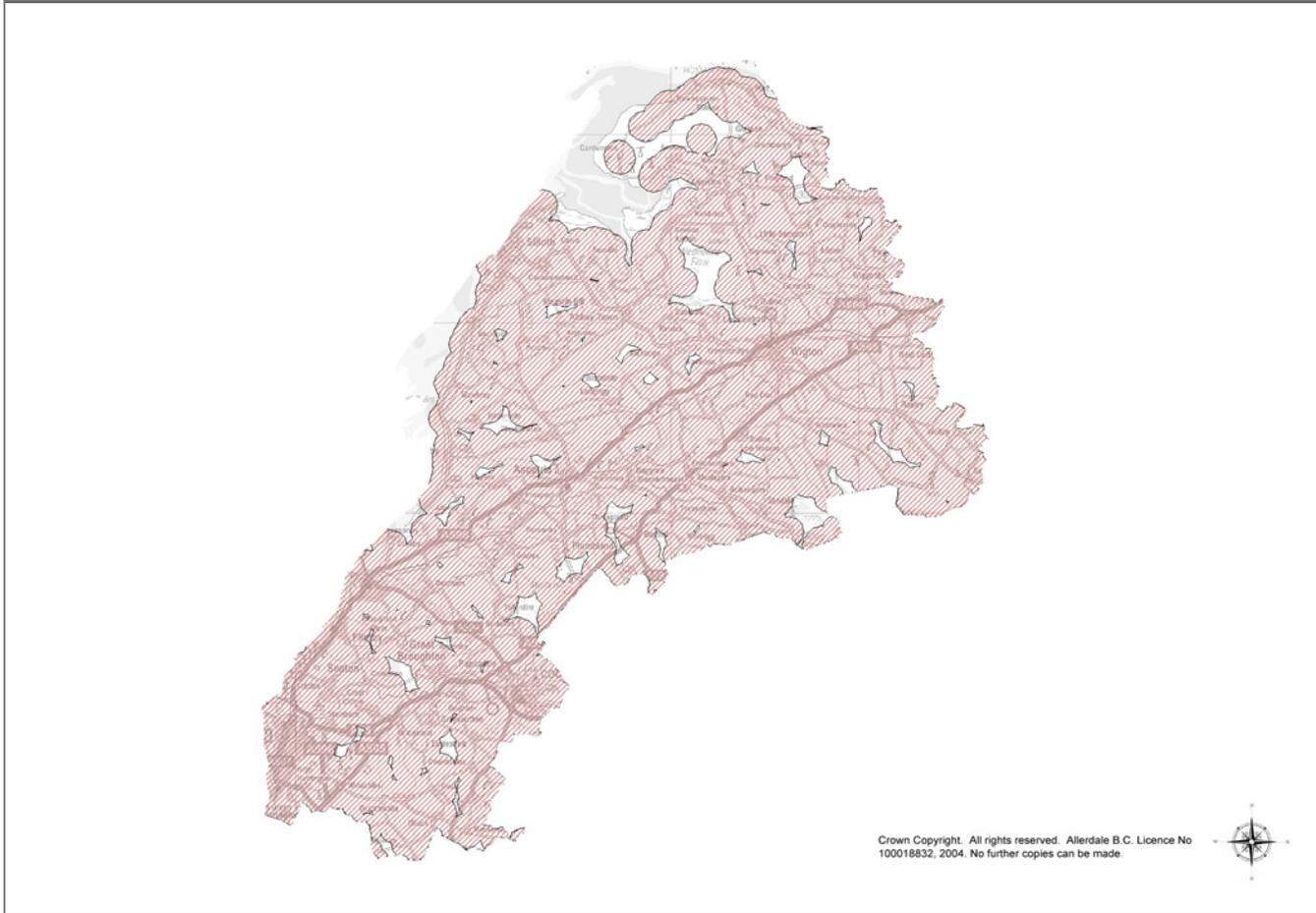
- 199. Policy S19 sets a positive framework for the development of renewable energy across the Plan Area reflecting both national planning policy and local evidence.
- 200. In order to ensure that only appropriate development takes place, the policy adopts a criteria based approach to encourage acceptable proposals to come forward to help meet national renewable energy targets. This addresses each proposal on its merits, and works in conjunction with other local plan policies to ensure the maximum level of resource is harnessed while ensuring that any impacts are, or can be made acceptable. Following both community concerns and evidence, this policy, ensures that amenity, landscape, biodiversity and geodiversity, Natura 2000 sites as well as historic assets are protected.

Great emphasis is placed on the consideration of the potential for cumulative adverse impacts arising from the growing number of renewable (especially commercial wind) developments across the Plan Area.

201. In some instances renewable and low carbon energy proposals can result in unacceptable impacts that preclude development in some areas. For example, inappropriately located wind turbines have the potential to impact on protected bird flight paths and sites, as well as protected landscapes such as Areas of Outstanding Natural Beauty, or heritage assets.
202. The Habitats Regulations Assessment produced alongside this plan suggests that without detailed assessment and bird surveys it is difficult to prove that further wind turbines will not have a cumulative effect on the SPA bird populations during construction and operation of the wind farms. Therefore, wind development proposals will be expected to demonstrate that there will be no significant adverse effects on protected bird or bat species, when considered alone and in combination with other existing and proposed wind farms or vertical structures. The Allerdale Local Validation Checklist provides further details on the circumstances and survey scope that will be expected.
203. An Assessment of Likely Significant Effect should be carried out on any developments with potential for impacting directly or indirectly on Natura 2000 sites. Appropriate Assessment will be required for any development with a likely significant effect on Natura 2000 sites. Where proposals have a significant adverse effect on Natura 2000 sites that cannot be made acceptable through mitigation they should not be allowed to go ahead. Where mitigation is proposed, measures should be clearly defined and where appropriate secured by planning obligations. Where mitigation is proposed, measures should be clearly defined and where appropriate secured by planning obligations.
204. In order to address community concerns and in the interests of residential amenity and safety, a minimum separation distance of 800m between wind turbines (over 25m) and residential properties will be expected. It is recognised that in some cases due to site-specific factors such as orientation of views, landcover, other buildings and topography it may be appropriate to vary this threshold, where it can be demonstrated through evidence that there is no unacceptable impact on residential amenity. Shorter distances may also be appropriate if there is support from the local community.
205. Further guidance related to wind development is provided in the Cumbria Wind Energy Supplementary Planning Document and any update here after.
206. In some cases the large scale nature of some renewable technologies can give rise to unacceptable impacts which could make them

unacceptable; such as large wind turbines on protected landscapes such as the Solway Coast Area of Outstanding Natural Beauty (AONB), and Hadrian's Wall WHS. Within these sensitive landscapes the policy ensures that renewable schemes are in keeping with the aims and objectives of the designated areas, and of a scale that will result in minimal impact.

Appendix 3 – Indicative map⁵ demonstrating application of policy approach



⁵ Map shows application of a separation distance of 800m from residential properties. It does not consider other physical or policy constraints.