

## 3 Landscape Baseline

### Landscape character

- 3.1 The landscape character baseline for the study is set out in the Newark and Sherwood Landscape Character Assessment (NSLCA), first published in 2010 as part of a county-wide characterisation of Nottinghamshire. The NSLCA was updated in 2013 and was adopted by the Council as a Supplementary Planning Document on 11 December 2013.
- 3.2 The NSLCA divides the district across five regional character areas (RCA) which extend beyond the district boundaries. The RCA boundaries are shown in **Figure 3.1**.
- 3.3 As part of the county-wide character assessment, the area was also subdivided into a number of landscape character types (LCT) which recur across the county. Eight of these LCTs occur within Newark and Sherwood.
- 3.4 The NSLCA divided each of the RCAs into landscape description units (LDU) each of which was further broken down into landscape character parcels (LCP). Following the collection of survey information, similar LCPs were grouped together to form policy zones. These policy zones form the basic units which are described in detail in the NSLCA.
- 3.5 Within each RCA, the policy zones are assigned a LCT. Each RCA has its own group of LCTs, which are derived from the county-wide LCTs but differ in detail and in their precise boundaries. As such, the policy zones are described under a total of 16 LCTs.
- 3.6 It is these 16 LCTs, listed in **Table 3.1** and illustrated in **Figure 3.1**, which form the baseline to the present study. The sensitivity assessment in **Section 4** presents an evaluation of each of these LCTs, and provides guidance on appropriate siting and design of wind energy development in each. This study has adopted the LCTs as they are defined in the NSLCA, with the exception of the Mid Nottinghamshire Farmlands: Village Farmlands with Ancient Woodland. This LCT has been split, with northern and southern areas considered separately, due to local variations in character and the large extent of the LCT.
- 3.7 The NSLCA Supplementary Planning Documents are available on the Newark and Sherwood District Council website:
  - <http://www.newark-sherwooddc.gov.uk/spds/>

**Table 3.1 Landscape Character Types**

<b>Sherwood RCA</b>
Sherwood: Village Farmlands
Sherwood: Meadowlands
Sherwood: Wooded Estatelands
Sherwood: Wooded Farmlands
Sherwood: Meadowlands with Plantations
Sherwood: Estate Farmland
<b>Mid Nottinghamshire Farmlands RCA</b>
Mid Nottinghamshire Farmlands: Village Farmlands with Ancient Woodland
Mid Nottinghamshire Farmlands: Meadowlands
Mid Nottinghamshire Farmlands: Estate Farmlands with Plantations
Mid Nottinghamshire Farmlands: Village Farmlands
<b>Trent Washlands RCA</b>
Trent Washlands: Village Farmlands
Trent Washlands: River Meadowlands
<b>East Nottinghamshire Sandlands RCA</b>
East Nottinghamshire Sandlands: Village Farmlands
East Nottinghamshire Sandlands: Village Farmlands with Plantations
<b>South Nottinghamshire Farmlands RCA</b>
South Nottinghamshire Farmlands: Meadowlands
South Nottinghamshire Farmlands: Village Farmlands

## Designated landscapes

- 3.8 There are no landscapes in Newark and Sherwood, or in the buffer area, which are protected at a national level for their landscape quality/ scenic value (i.e. National Parks or AONBs). Nor are there any local or regional designations which are specifically designed to protect landscape quality or scenic value. Nevertheless landscapes may have scenic qualities. These may be recorded in the landscape character assessment, or picked up through fieldwork.
- 3.9 The Nottingham-Derby Green Belt wraps around the Nottingham urban area, and extends north-east into Newark and Sherwood. The green belt is a planning tool rather than a landscape designation: land is not included within the green belt for its scenic quality. The presence of the green belt does not therefore affect judgements about the underlying sensitivity of the landscape and is not referred to in the assessment criteria. However, it is a consideration in determining applications and may affect decisions about siting and design. Where an LCT extends into the green belt this has been noted in the guidelines section. The extent of the green belt within Newark and Sherwood is shown in **Figure 3.2**.

## Heritage aspects of the landscape

- 3.10 The aim of this study is not to provide a comprehensive heritage assessment. However where there is a clear relationship between heritage asset(s) and landscape this has been addressed. Landscapes with particular heritage significance include those designated at a national level as registered parks and battlefield sites, as well as numerous conservation areas and other local landscape heritage designations.
- 3.11 Policy DM9 of the Local Development Framework (LDF) discusses these historic landscapes, and states that:
- “Development proposals that are within and outside these areas have the potential to impact on their character and consequently should be designed to respect the individual characteristics of the particular area and thereby minimise the impact upon it.”*
- 3.12 The impact of wind turbines on these areas will vary: the imposition of a large turbine within an intact designed landscape will have a different effect than a small turbine placed at the fringe of a historic battlefield, where the heritage interest is less visible. For the purposes of this study, the designations have been taken as an indicator of the value placed on historic landscapes.
- 3.13 Designations which have been considered are shown on **Figure 3.2** and are briefly discussed below.
- There are four sites within the district which are included on the English Heritage **Register of Historic Parks and Gardens** for their special historic interest. Two (Thoresby and Rufford) are extensive parklands associated with country houses, while two are smaller gardens relating to historic buildings within settlements. The designated areas, plus views identified in the register entries, will be particularly sensitive to wind energy development. The registered sites are:
    - Thoresby Park to the north of New Ollerton (grade I);
    - Thurgarton Hundred Workhouse at Southwell (grade II\*)
    - Rufford Abbey to the south of Ollerton (grade II); and
    - Newark Castle Gardens, Newark (grade II).
  - One site within the district is included on the English Heritage **Register of Historic Battlefields** for its special historic interest. This is the site of the Battle of Stoke Field (1487), and lies between East Stoke and the Trent, to the south-west of Newark.
  - The **historic landscape around Laxton** is England’s only remaining medieval open-field system still in use. The field system is identified and protected in the development plan, and covers an irregular area extending up to 2 km from the village. This area and its immediate setting will be sensitive to wind energy development. Policy DM9 of the LDF highlights the need for sustainable management of the **field system**, but also states that *“proposals that*

*adversely affect this heritage asset by virtue of character or operation” will not be granted consent.*

- The **setting of the town of Southwell** has been the subject of a detailed study,<sup>10</sup> which has led to the definition of protected views from, of and across the town’s principal heritage assets (the Minster, Holy Trinity Church and Workhouse) and an area defined as the immediate surroundings of the Workhouse. The extents of these designations are defined on the LDF Policies Map, and have associated policies (Policy So/PV and Policy So/Wh) which seek to provide for their protection. The views and the settings of the assets will be particularly sensitive to wind energy development.
- **Sherwood Forest Heritage Area** occupies the north-west corner of the district, including Sherwood Forest Country Park and the Major Oak, as well as Thoresby Park. The designation seeks to protect the traditional landscape of forest and heath which was once widespread in this part of Britain.

- 3.14 The designated areas are relatively small in relation to the LCTs which form the basis for the assessment and the presence of one or more of these designated areas is therefore considered unlikely to affect the sensitivity of the LCT as a whole. However, their presence will influence the siting and design guidance within an LCT. Relevant designations are therefore listed separately for each LCT in order that they are considered systematically in preparing the guidelines.
- 3.15 Conservation areas are designated by the Council to protect the special architectural and historic interest, character and appearance of settlements, although in some cases they extend into the rural context. There are 47 conservation areas within Newark and Sherwood, of which 15 are the subject of completed appraisals. The special qualities of conservation areas are set out in conservation area appraisals, including reference to views of the settlement in the landscape. Where these appraisals are available, they have been reviewed and any key relationships with the landscape are noted.
- 3.16 The heritage value of other historic environment features, such as scheduled monuments and listed buildings, are not considered in this study. Further information and guidance on this topic is available from English Heritage.<sup>11</sup>

### Heritage aspects within the buffer

- 3.17 Thoresby Park and Rufford Abbey form part of the Dukeries, a unique conjunction of substantial estate houses, which also includes the Registered Parks and Gardens of Welbeck Abbey and Clumber Park, as well as Worksop Manor, which are all within Bassetlaw district to the north. Clumber Park in particular is contiguous with Thoresby, while Welbeck Abbey is to the west, within 5km of Newark and Sherwood. As with the rest of the Sherwood Forest area, the Dukeries are overlaid by historical and later mineral workings.
- 3.18 Other Registered Parks and Gardens which are close to the district boundary include Doddington Hall west of Harby, and Flintham Hall to the south of Newark. Further afield are the substantial parks of Belvoir Castle and Belton House, across the Vale of Belvoir to the south-east.

### Conclusion on historic environment designations

- 3.19 The focus of the sensitivity assessment remains on the underlying landscape and the criteria set out in **Section 2**. The study does not extend to consideration of impacts on heritage value, and the designations are generally relatively small in extent, compared to the LCTs. On this basis they do not typically influence the findings of the sensitivity assessment, albeit that the presence of historic environment designations often coincides with other indicators of higher sensitivity.
- 3.20 In reviewing these historic landscapes it is recognised that the most vulnerable are the protected views around Southwell (Policy So/PV and Policy So/Wh). This designation is specifically visual, relating to the setting and surroundings of three landmark buildings, and is therefore likely to be highly sensitive to the introduction of turbines, even outside the designated areas. In recognition

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<sup>10</sup> Nottinghamshire County Council and Newark and Sherwood District Council (2012) Southwell Landscape Setting.

<sup>11</sup> English Heritage (2005) Wind Energy and the Historic Environment: English Heritage (2011) The Setting of Heritage Assets.

of its importance within the district, particular attention is drawn to the Southwell area in the Meadowlands and Village Farmlands LCTs within the Mid Nottinghamshire Farmlands.

## The Buffer Area

### Landscape character

- 3.21 The landscape character of the buffer area is set out in the following landscape character assessments:
- Landscape Character Assessment – Bassetlaw, Nottinghamshire (2009);
  - Greater Nottingham Landscape Character Assessment (2009);
  - West Lindsey Landscape Character Assessment (1999);
  - North Kesteven Landscape Character Assessment (2007);
  - South Kesteven Landscape Character Assessment (2007); and
  - Melton Landscape Character Assessment (update 2011).
- 3.22 These documents were briefly reviewed to gain an understanding of the landscapes which immediately adjoin Newark and Sherwood, and where landscape character is continuous across administrative boundaries. The Bassetlaw and Greater Nottingham LCAs are based on the same county-wide LCA as the NSLCA, and as such are readily comparable in the way that regional character areas have been defined across district boundaries. The relationships of these and other neighbouring landscape character types with the landscapes of Newark and Sherwood is shown in **Figure 3.3**.

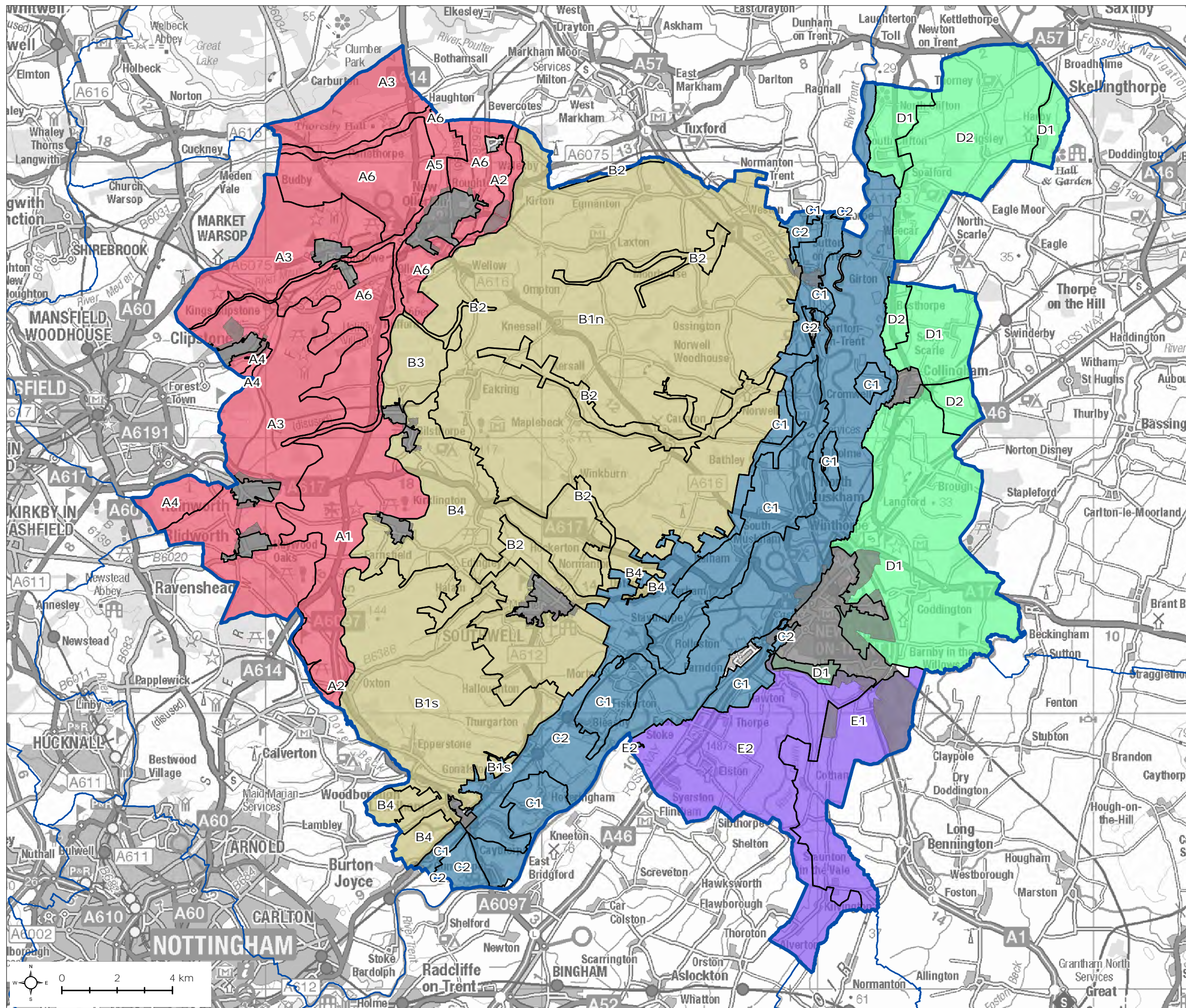
### Wind turbines

- 3.23 The examination of cumulative effects requires consideration of operational and proposed turbines within the buffer area. To that end, a number of local authorities were contacted to obtain details of operational and consented wind turbines, and turbines subject to live applications or appeals. Data was supplied during October and November 2013 by the following authorities:
- West Lindsey
  - North Kesteven
  - South Kesteven
  - Melton
  - Rushcliffe
  - Nottingham
  - Gedling
  - Broxtowe
  - Ashfield
  - Mansfield
  - Bolsover
  - Bassetlaw
- 3.24 The supplied data was mapped and is presented in **Figure 3.4**. This map is based on the information received from local authorities which has not been updated or checked for accuracy. It therefore represents a snapshot of wind turbine development and development pressure, which will inevitably change in the future.

## Cumulative zone of theoretical visibility

- 3.25 Cumulative zone of theoretical visibility (CZTV) maps have been generated, based on the method set out in **Section 2**, for three development scenarios, as follows:
- Operational wind turbines;
  - Operational and consented wind turbines; and
  - Operational, consented and proposed wind turbines.

- 3.26 In each case, all relevant turbines within Newark and Sherwood and within the buffer area have been included. The final scenario includes scoping-stage proposals which have only been identified within Newark and Sherwood. The first scenario represents the current state of development, while the second and third illustrate potential future patterns of visibility. There is a relatively high level of certainty that consented turbines will be built, but the final scenario is more speculative, since proposed turbines may not be consented or built. The actual future pattern of development may be different, but the pattern of proposed development illustrates the current pressures on the landscape.
- 3.27 It should be noted that each CZTV is based on bare earth digital terrain modelling, which takes no account of trees, hedges, buildings and other features which serve to restrict visibility in the field. As such they overestimate the level of development visible from any one point, though the general patterns are considered to be representative. It should also be borne in mind that visibility of turbines does not equate to an impact on landscape character or views.
- 3.28 The CZTV of all operational turbines is shown in **Figure 3.5**. The highest level of theoretical visibility is indicated across the higher ground within western and central parts of the district, and more extensively across the area south and west of Newark, extending along the east of the Trent and beyond the district boundary. **Figure 3.5a** shows this CZTV overlaid with the LCT boundaries, indicating that the largest number of turbines is theoretically visible from areas of the Trent Washlands and South Nottinghamshire, as well as from the Village Farmlands within Sherwood and Mid Nottinghamshire. The lowest levels of theoretical visibility are located in northern Sherwood, southern Mid Nottinghamshire, and within incised river valleys.
- 3.29 The CZTV of all operational and consented turbines is shown in **Figure 3.6**. The majority of the additional development in this scenario is outside Newark and Sherwood, particularly to the west and north-east. This has the effect of reducing the apparent contrast between areas of higher and lower theoretical visibility. However, the patterns of theoretical visibility remain similar, with the main concentration in the Trent Valley and south of Newark, extending north into West Lindsey District. More intermittent theoretical visibility of turbines occurs across the higher parts of Newark and Sherwood. **Figure 3.6a** shows this CZTV overlaid with the LCT boundaries, indicating that the distribution of theoretical visibility is largely as for operational turbines only. There are fewer areas with no theoretical visibility of turbines.
- 3.30 The CZTV of all operational, consented and proposed turbines is shown in **Figure 3.7**. This indicates an increased concentration of the highest levels of theoretical visibility extending across most of the landscape east and south of the Trent, and across relatively large areas to the east, with lower levels of theoretical visibility within Newark and Sherwood restricted to isolated areas within incised valleys. **Figure 3.7a** shows this CZTV overlaid with the LCT boundaries, indicating extensive theoretical visibility across most of the Trent Washlands, East Nottinghamshire and South Nottinghamshire. There are intermittent areas of relatively high levels of theoretical visibility across remaining landscapes, with lower levels of theoretical visibility restricted to small valley areas including the southern Trent Valley and the River Maun.
- 3.31 The CZTVs have informed the discussion of cumulative effects for each LCT in **Section 4**.



# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.1

## Landscape Character Types

- Study area
- Local authority boundaries
- Landscape character types
- Settlement boundaries

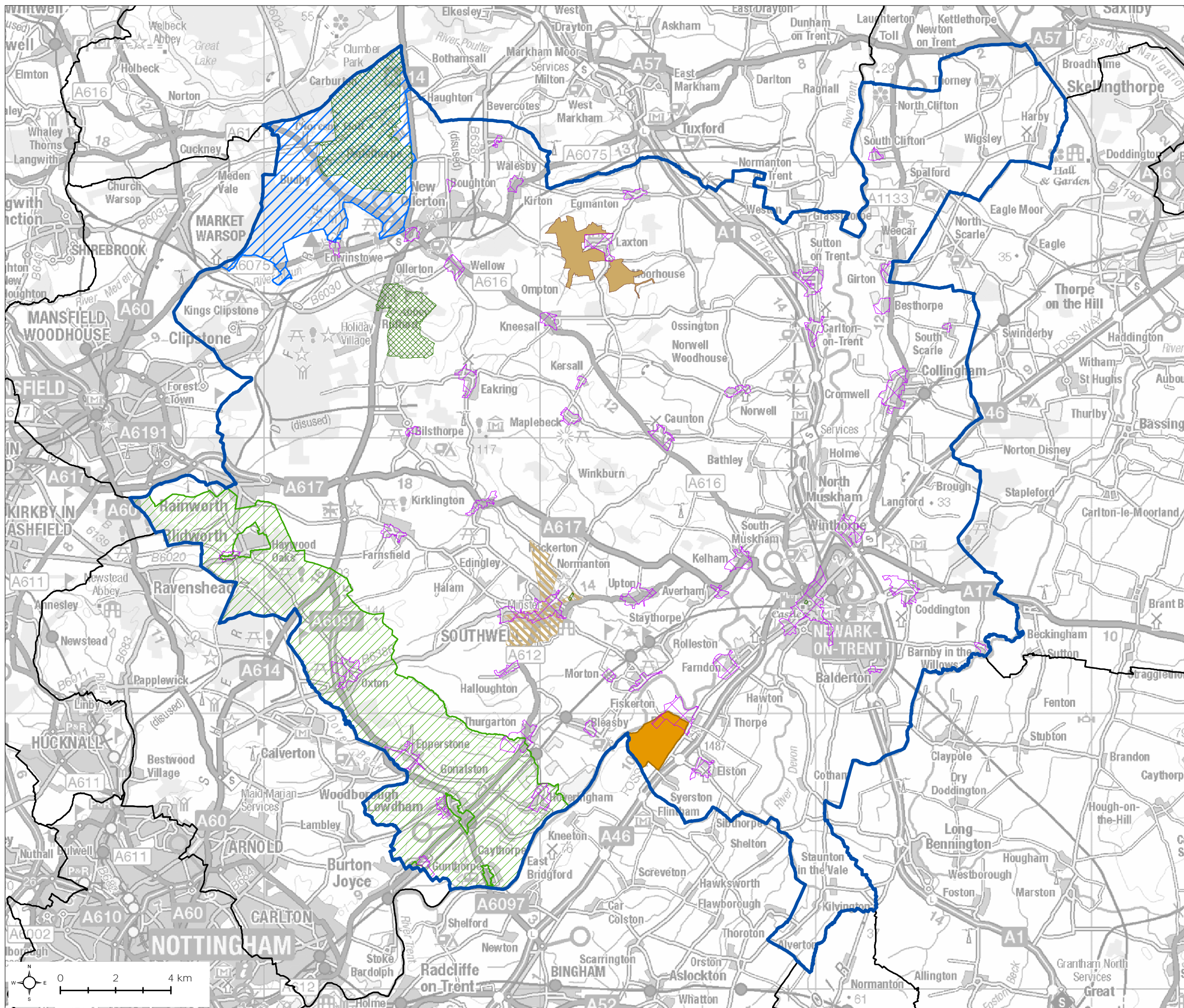
## Regional character areas

- Sherwood
  - A1 - Village Farmlands
  - A2 - Meadowlands
  - A3 - Wooded Estatelands
  - A4 - Wooded farmlands
  - A5 - Meadowlands with plantations
  - A6 - Estate farmland
- Mid Nottinghamshire Farmlands
  - B1n - Village farmlands with ancient woodland: Northern area
  - B1s - Village farmlands with ancient woodland: Southern area
  - B2 - Meadowlands
  - B3 - Estate farmlands with plantations
  - B4 - Village farmlands
- Trent Washlands
  - C1 - Village farmlands
  - C2 - River meadows
- East Nottinghamshire Sandlands
  - D1 - Village farmlands
  - D2 - Village farmlands with plantations
- South Nottinghamshire Farmlands
  - E1 - Meadowlands
  - E2 - Village farmlands

Map Scale @ A3: 1:135,000






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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.2

## Designated Landscapes

-  Study area
-  Local authority boundaries
-  Conservation areas
-  Green belt
-  Historic landscape around Laxton
-  Register of historic parks and gardens
-  Swallow protected views\*
-  Register of historic battlefields
-  Sherwood Forest heritage area

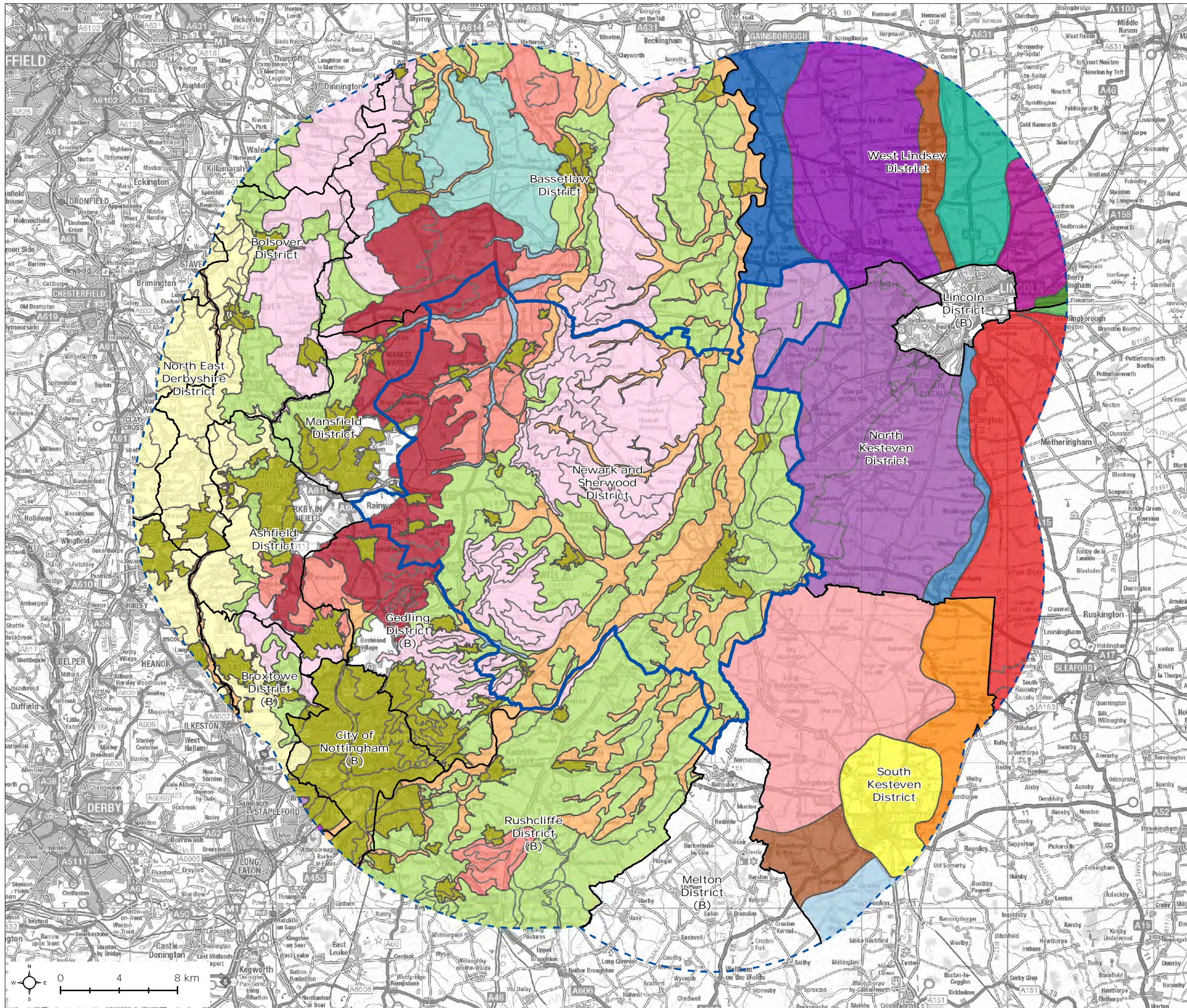
\*Swallow Protected Views Designation (Policy So/PV) Please refer to the Allocations and Development Management DPD and Swallow Landscape Setting Study for guidance

Map Scale @ A3: 1:135,000



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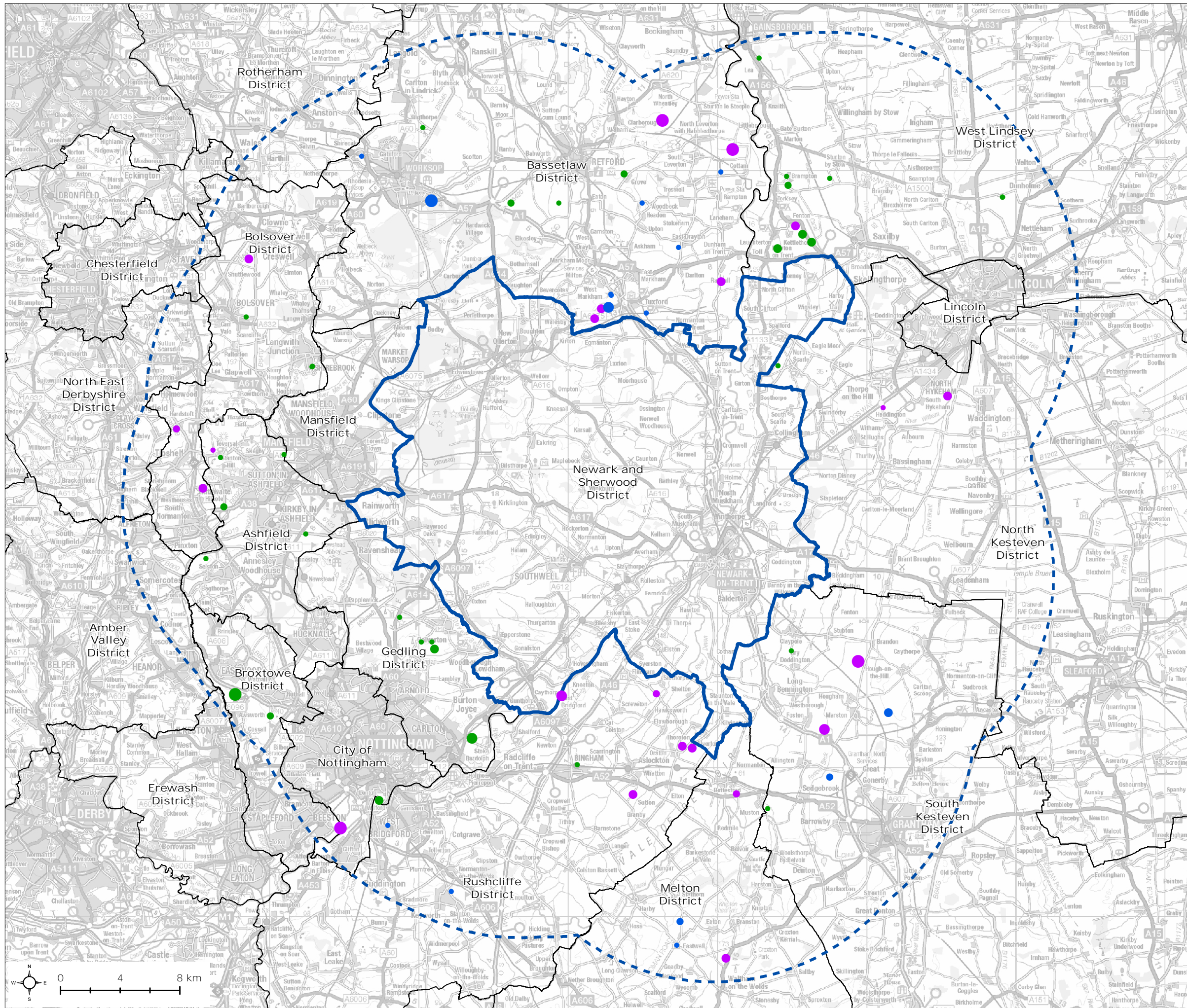


# Newark and Sherwood Landscape Capacity for Wind Turbines

**Figure 3.3**  
Landscape Character in the Buffer Area

- Study area
  - 15km buffer area
  - Local authority boundaries
- Landscape Character Areas**
- North Kesteven
- Central Plateau
  - Lincoln Cliff
  - The Fens
  - Trent and Witham Vales
- South Kesteven
- Grantham Scarps and Valleys
  - Harlaxton Denton Bowl
  - Kesteven Uplands
  - Southern Lincolnshire Edge
  - Trent and Belvoir Vales
- West Lindsey
- Fenland
  - Limestone Dip Slope
  - Lincoln Fringe
  - The Cliff
  - The Till Vale
  - Trent Valley
- Nottinghamshire and Derbyshire (County-wide Landscape Character Types)
- Coalfield
  - Estatelands with Plantations
  - Estate Farmlands
  - Meadowlands with Plantations
  - Meadowlands
  - Urban
  - Village Farmlands with Ancient Woodlands
  - Village Farmlands with Plantations
  - Village Farmlands
  - Wooded Estatelands
  - Wooded Meadowlands

Map Scale @ A3: 1:255,000



# Newark and Sherwood Landscape Capacity for Wind Turbines

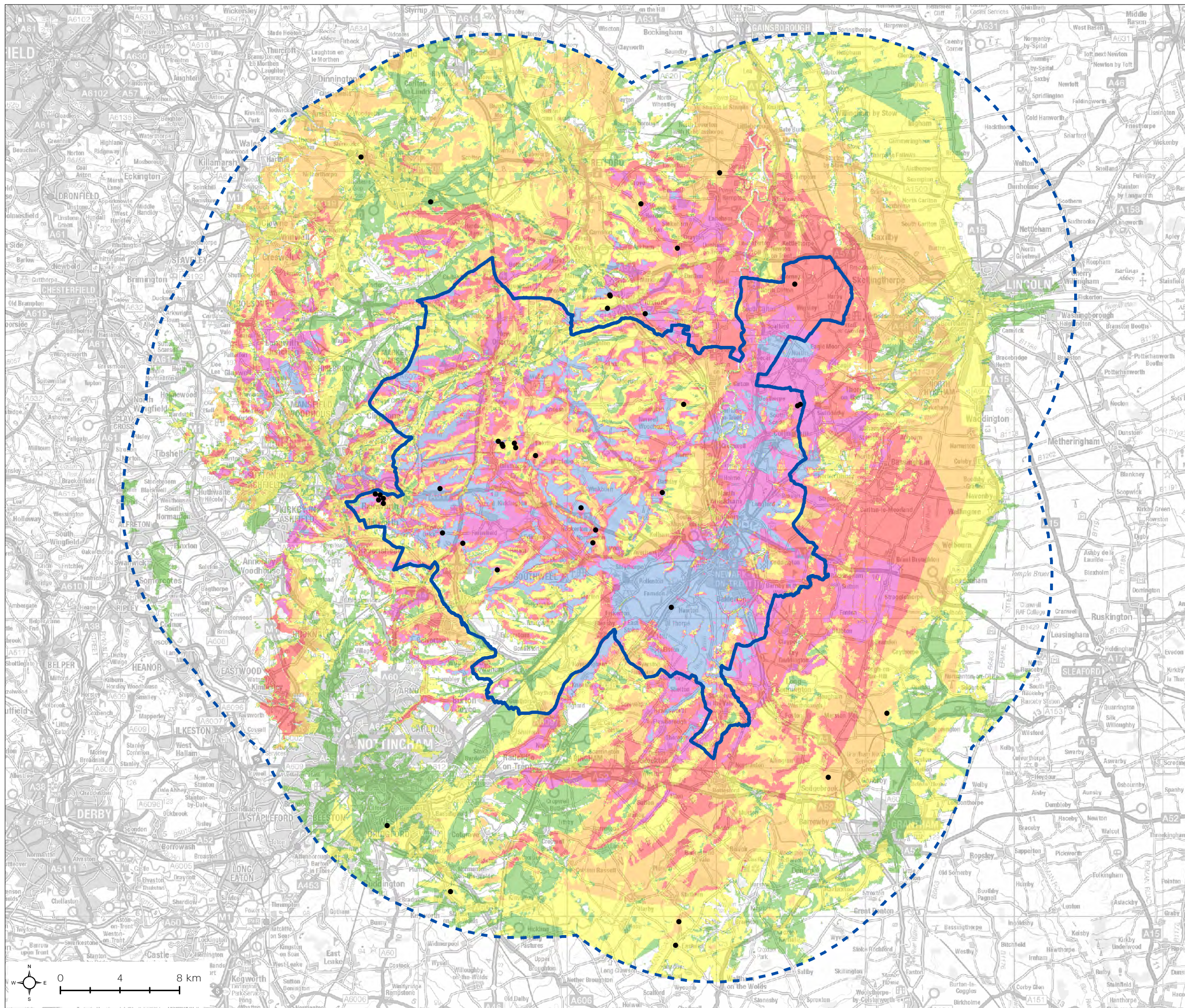
Figure 3.4  
Wind Energy in the Buffer Area

- Study area
  - 15km buffer area
  - Local authority boundaries
- Operational**
- Very large (111m or more)
  - Large (81 to 110m)
  - Medium (51 to 80m)
  - Small-medium (31 to 50m)
  - Small (15 to 30m)
- Consented**
- Very large (111m or more)
  - Large (81 to 110m)
  - Medium (51 to 80m)
  - Small-medium (31 to 50m)
  - Small (15 to 30m)
- Application**
- Very large (111m or more)
  - Large (81 to 110m)
  - Medium (51 to 80m)
  - Small-medium (31 to 50m)
  - Small (15 to 30m)

Map Scale @ A3: 1:250,000

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.5  
 Cumulative Zone of Theoretical Visibility: Operational Turbines

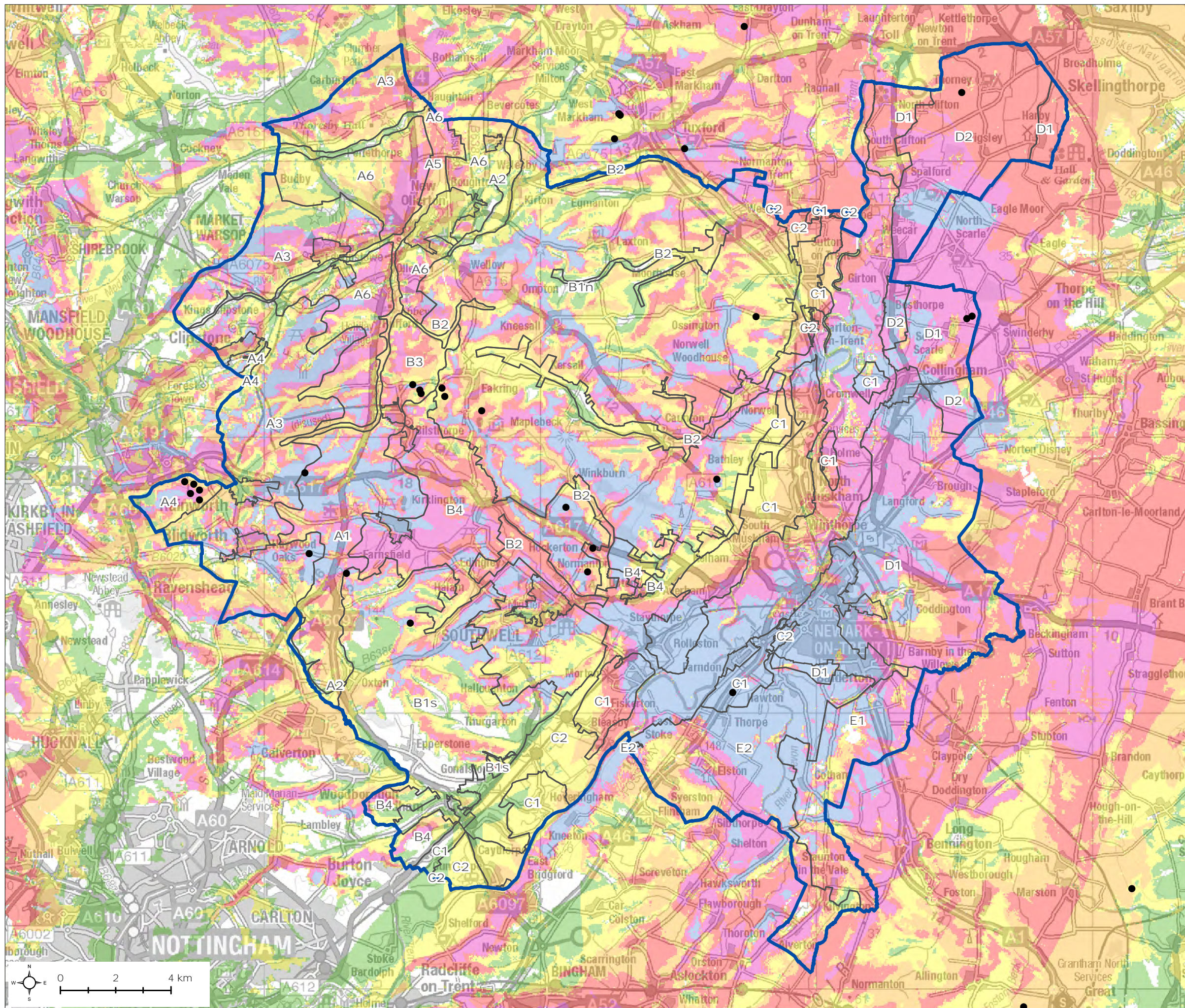
- Turbine locations
- ▭ Study area
- ▭ 15km buffer area
- 1 wind farms or turbines visible
- 2 - 3 wind farms or turbines visible
- 4 - 5 wind farms or turbines visible
- 6 - 7 wind farms or turbines visible
- 8 - 9 wind farms or turbines visible
- 10 - 15 wind farms or turbines visible

Notes:  
 The ZTV includes all operational and under-construction wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:250,000

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.5a

Cumulative Zone of Theoretical Visibility: Operational Turbines

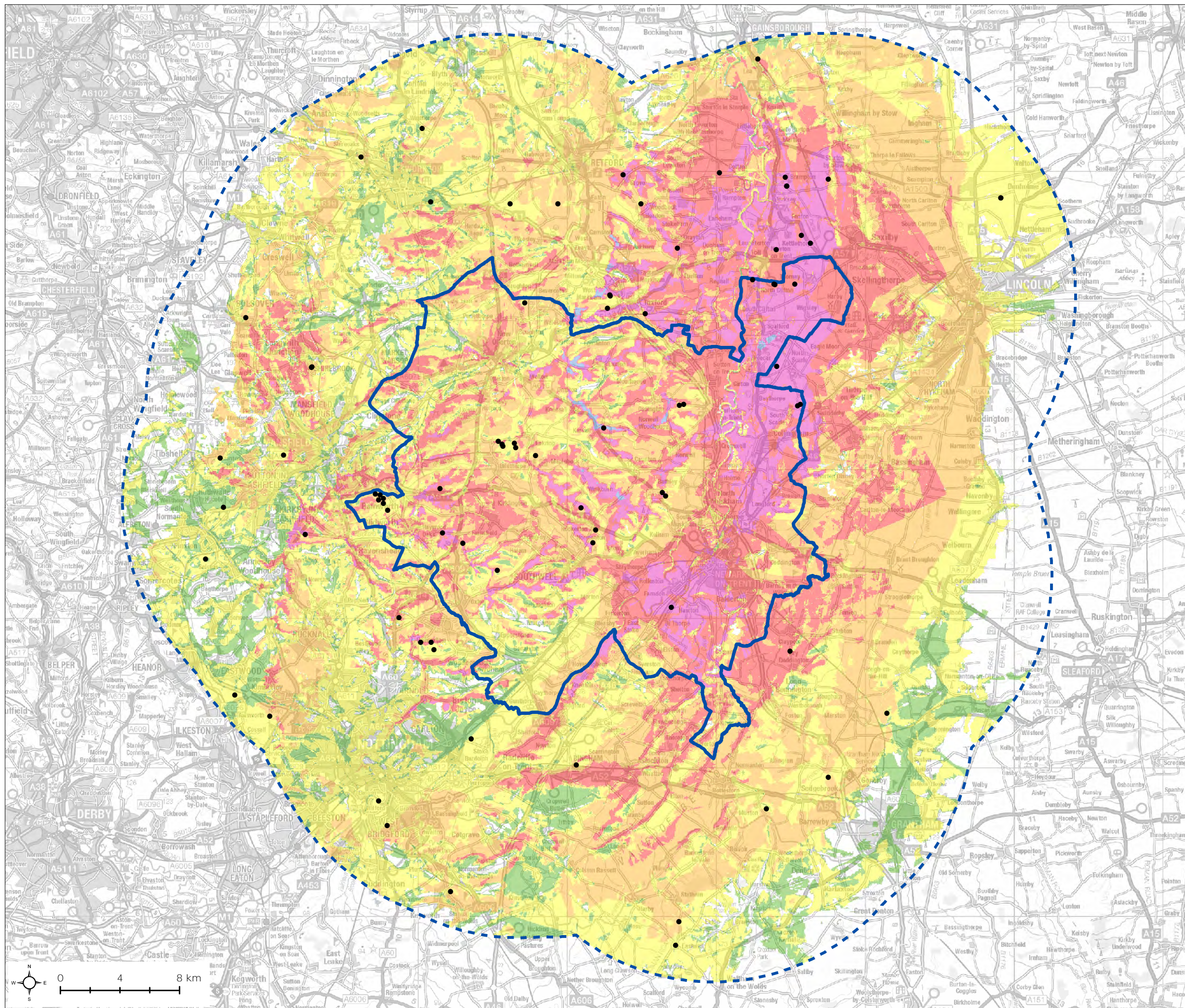
- Turbine locations
- ▭ Study area
- ▭ Landscape character types
- ▭ 1 wind farms or turbines visible
- ▭ 2 - 3 wind farms or turbines visible
- ▭ 4 - 5 wind farms or turbines visible
- ▭ 6 - 7 wind farms or turbines visible
- ▭ 8 - 9 wind farms or turbines visible
- ▭ 10 - 15 wind farms or turbines visible

Notes:  
The ZTV includes all operational and under-construction wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:135,000

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.6

Cumulative Zone of Theoretical Visibility: Consented Turbines

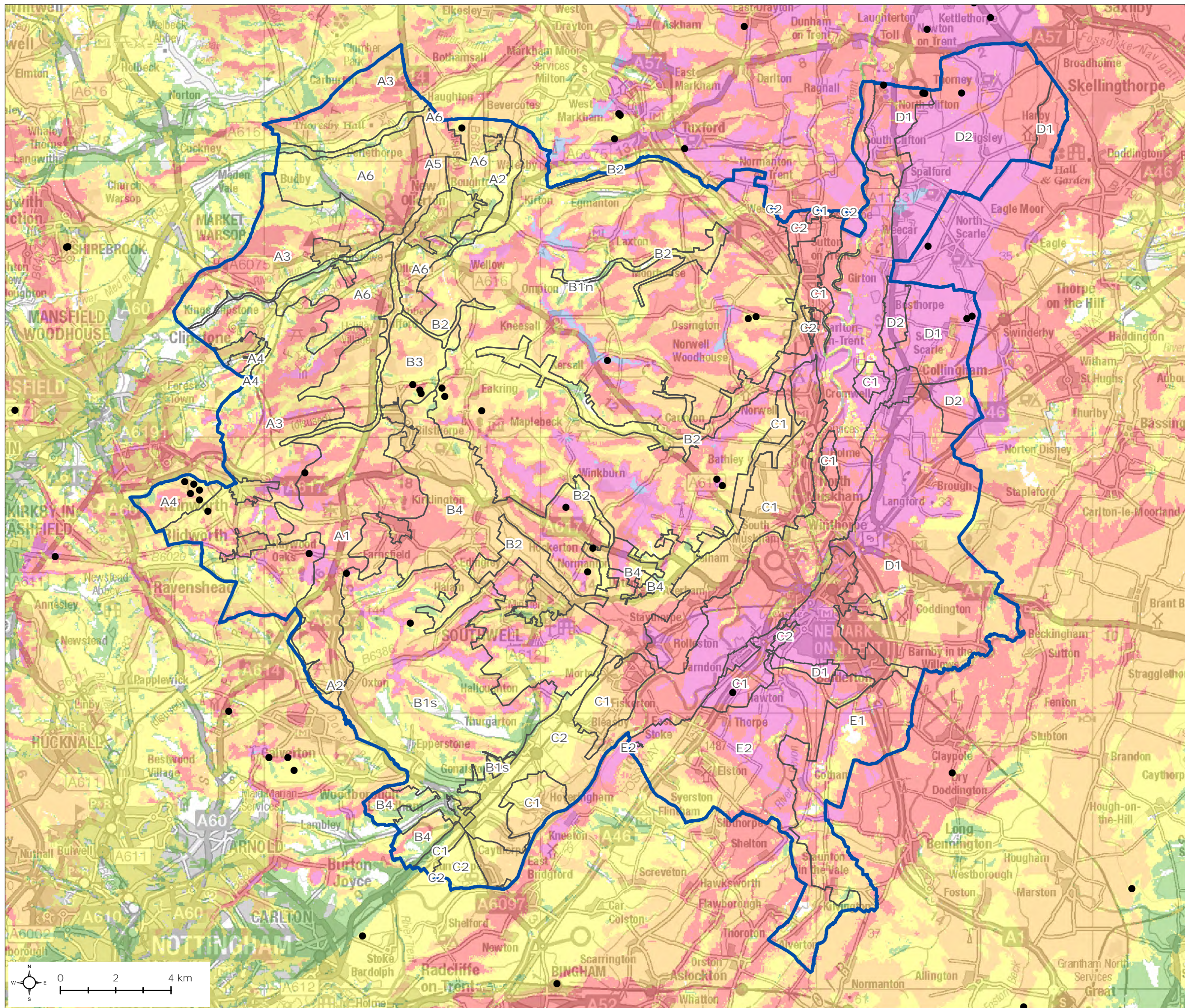
- Turbine locations
- ▭ Study area
- ▭ 15km buffer area
- 1 wind farms or turbines visible
- 2 - 5 wind farms or turbines visible
- 6 - 10 wind farms or turbines visible
- 11 - 15 wind farms or turbines visible
- 16 - 20 wind farms or turbines visible
- 21 - 24 wind farms or turbines visible

Notes:  
The ZTV includes all operational, under-construction and consented wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.6a

Cumulative Zone of Theoretical Visibility: Consented Turbines

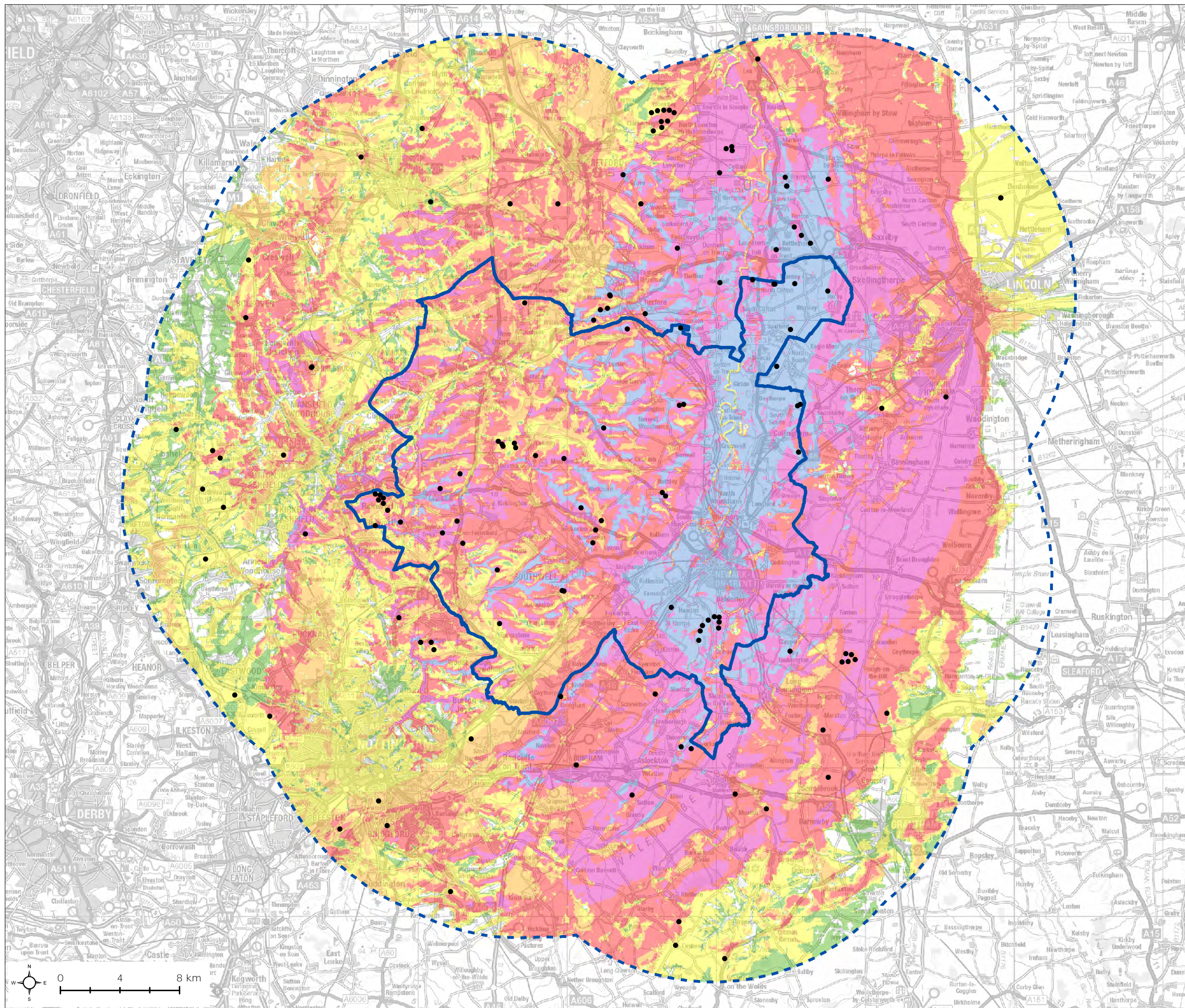
- Turbine locations
- ▭ Study area
- ▭ Landscape character types
- ▭ 1 wind farms or turbines visible
- ▭ 2 - 5 wind farms or turbines visible
- ▭ 6 - 10 wind farms or turbines visible
- ▭ 11 - 15 wind farms or turbines visible
- ▭ 16 - 20 wind farms or turbines visible
- ▭ 21 - 24 wind farms or turbines visible

Notes:  
The ZTV includes all operational, under-construction and consented wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:135,000

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.7  
Cumulative Zone of Theoretical Visibility: Proposed Turbines

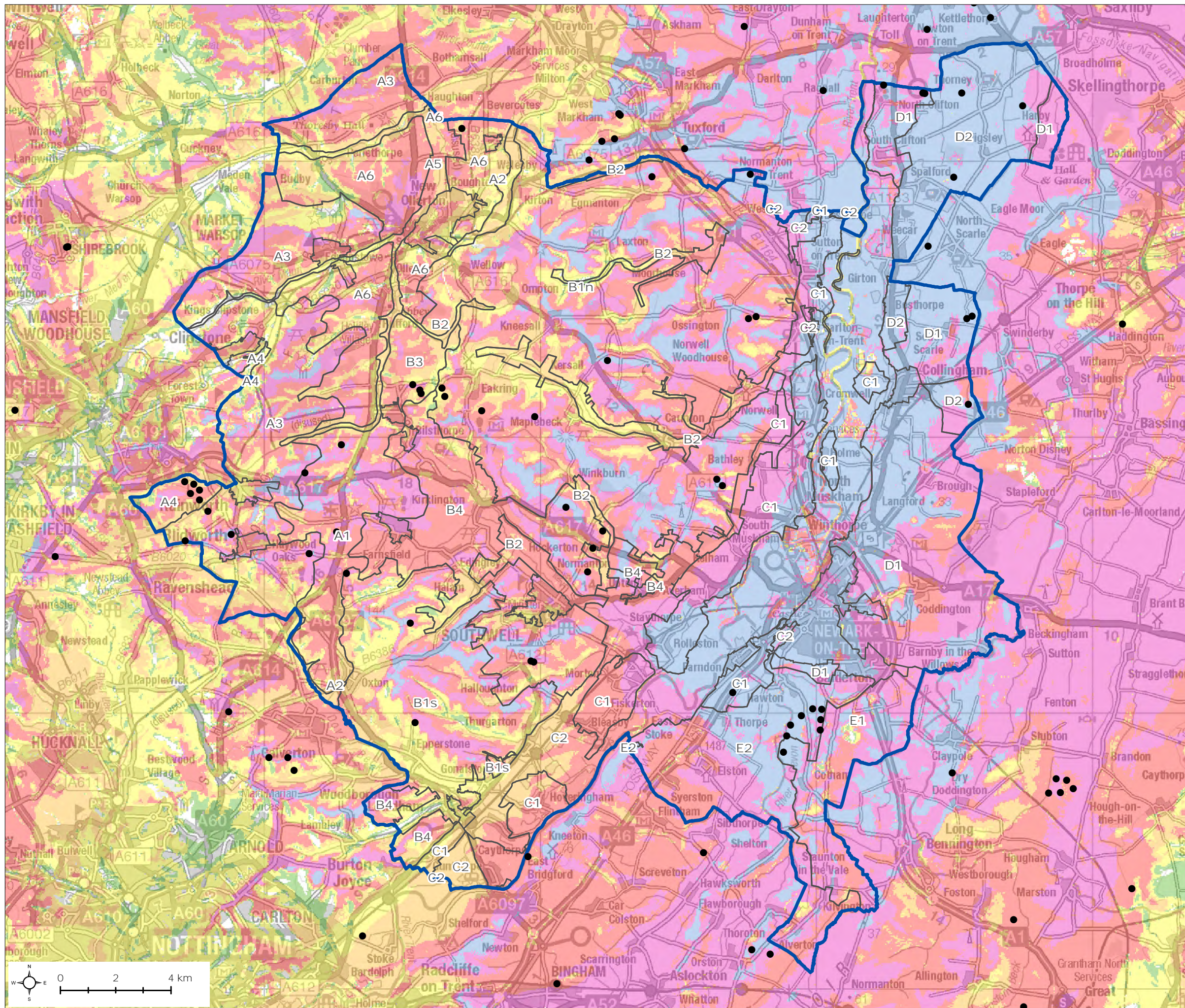
- Turbine locations
- ▭ Study area
- ▭ 15km buffer area
- 1 wind farms or turbines visible
- 2 - 5 wind farms or turbines visible
- 6 - 10 wind farms or turbines visible
- 11 - 20 wind farms or turbines visible
- 21 - 30 wind farms or turbines visible
- 31 - 47 wind farms or turbines visible

Notes:  
The ZTV includes all operational, under-construction, consented and appeal/application wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:250,000

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# Newark and Sherwood Landscape Capacity for Wind Turbines

Figure 3.7a

## Cumulative Zone of Theoretical Visibility: Proposed Turbines

- Turbine locations
- ▭ Study area
- ▭ Landscape character types
- ▭ 1 wind farms or turbines visible
- ▭ 2 - 5 wind farms or turbines visible
- ▭ 6 - 10 wind farms or turbines visible
- ▭ 11 - 20 wind farms or turbines visible
- ▭ 21 - 30 wind farms or turbines visible
- ▭ 31 - 47 wind farms or turbines visible

Notes:  
 The ZTV includes all operational, under-construction, consented and appeal/application wind turbines in the study area and 15km buffer area.

It is calculated to turbine tip height from a height of 2m above ground level. The terrain model is bare ground and derived from OS Terrain 50 height data. The earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:135,000

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