Heckington Fen Wind Park

Further Environmental Information
Landscape Clarification

ecotricity

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LANDSCAPE CLARIFICATION

LANDSCAPE CLARIFICATION STATEMENT

Introduction

1.1 The following additional information was requested by North Kesteven District Council (NKDC) for the purposes of clarifying specified sections of 2011 Heckington Fen Environmental Statement (ES) Chapter 5 Landscape and Visual (LVIA):

- Further assessment of the A17 including potential cumulative impact of Bicker Fen windfarm and the proposed development.
- Additional photomontages from the A17 within 15-20km of the application site approximately every 5km, incorporating the proposed development and Bicker Fen windfarm.
- Review of cumulative impact assessment in respect of the proposed development and Bicker Fen windfarm from the A17 and Helpringham and South Kyme.
- Two additional photomontages in the 2-5km distance range – these will be included in the A17 visualisations.

Statement on Methodology / Approach

1.2 The additional information for clarification has been carried out according to the same method as the LVIA which accords with best practice guidance set out in *inter alia* the following publications.

- Guidelines for Landscape and Visual Impact Assessment': Second Edition (GLVIA) – The Landscape Institute and Institute of Environmental Management and Assessment (2002); and
- 'Landscape Character Assessment: Guidance for England and Scotland' – The Countryside Agency (2002).

1.3 The approach taken in this exercise for clarification purposes is as follows:

- Provide additional visualisations from the A17 comprising seven photomontages/photwirelines and wirelines (**Figure 2**) and a set of detailed 'screened' ZTV plans (**Figure 4**) showing visibility of both the proposed development and Bicker Fen windfarm from the route, within 20km of the application site within North Kesteven District and 15km within adjacent districts, taking account of roadside planting.
- The ZTV 'with screening' plans show the visibility of both the proposed development and Bicker Fen windfarm (any part to blade-tip) along the route based on our fieldwork and a desktop analysis using Ordnance Survey mapping, Google Earth (including Streetview) and Bing. The ZTV was created in ArcMap using a Digital Surface Model (DSM) made up buildings (8m), woodland (15m) and roadside planting with an assumed height of 3m; and OS Landform Profile 10m Digital Terrain Model (DTM) data.
- The photomontages are annotated to show the location of Bicker Fen windfarm and the application proposal.
- Where it is not possible to see both wind energy projects in the same 70 degree field of view from a particular viewpoint, a 140 degree field of view visualisation is provided. This is a departure from the stated methodology and the extended field of view visualisations have been provided to assist the Council in its understanding of the scheme.
- The additional photomontage viewpoint locations were agreed between the parties during pre-submission consultation of this clarification assessment.

1.4 The photomontages, photowirelines, wirelines and ZTV plans give as accurate a picture as possible (within operational and other constraints) of the pattern and nature of visibility from the A17 looking towards both the application site and Bicker Fen windfarm, replicating the experience of people travelling along the A17 in both directions between RAF Cranwell and the A16 intersection.

1.5 Regarding survey work, photography and photomontage production it should be noted that the viewpoint locations represent those where it was possible: 1) to safely stop a vehicle, access the viewpoint and set up the camera equipment; and 2) see and record appropriate survey points (locators) within the view / photograph to construct the visualisations.

Clarification Assessment

1.6 The additional assessment information regarding Heckington Fen LVIA is set out below and in the attached schedules and figures.

A17 Road

1.7 A review of the assessment of the A17 has been undertaken. At the request of NKDC the stretch of road between the B1429 junction at RAF Cranwell and the A16 intersection at Algarkirk has been reassessed in the field and a desk-based analysis of views and visibility from the road carried out. Seven additional photomontages have been prepared to supplement those contained within the 2011 ES LVIA as follows:

Table 1 Additional Photomontage Viewpoints

Photomontage Viewpoint Data								Heckington Fen			Bicker Fen		
VP Ref	Viewpoint Location	Easting	Northing	AOD (m)	Bearing of View *	Direction of View *	Field of View	Distance to turbines (km)	Bearing to Wind Park	Direction of View to VWindpark	Distance to turbines (km)	Bearing to Wind Park	Direction of View to Windfarm
A	A17 RAF Cranwell	499708	348803	71	108	ESE	70	20.0	098	E	21.52	117	ESE
B	A17 Sleaford north	506780	347380	15	111	ESE	70	12.8	097	E	14.66	125	SE
C	A17 Sleaford east	508943	346413	14	111	ESE	140	10.6	093	E	12.34	126	SE
D	A17 Heckington west	512649	344649	6	108	ESE	70	7.0	082	E	8.31	131	SE
E	A17 Heckington east	515900	344145	6	115	ESE	140	4.0	071	ENE	5.72	148	SSE
F	A17 Swineshead	522732	341016	3	295	WNW	140	4.3	335	NNW	3.48	236	SW
G	A17 Hoffleet Stow	524556	337338	5	318	NW	140	8.4	334	NNW	4.98	285	WNW

* 'direction of view' means the direction of the centre of the view, or direction of the camera

1.8 The above visualisations and ZTV information, together with fieldwork provide the basis of the assessment for clarification purposes summarised below; the assessment of agreed photomontage viewpoints is provided at **Schedule 1** and **Schedule 2** of this document.

1.9 The length of A17 road between the B1429 junction at RAF Cranwell and the A16 intersection (the study area) is 36.7km. The ZTV analysis plans at **Figure 4** indicate that the proposed Heckington Fen Wind Park or parts of including just the blade tips would be visible in clear views from the route along approximately 21.6km of the route. Taking account of roadside planting, this occurs mainly passing RAF Cranwell (15-20km), approaching Heckington west (7-9km), between Heckington east and Swineshead (within 5km) and intermittently between the A16 and Swineshead (5-15km), and represents about 58.8% of the route. It is important to note that these distance and percentage figures represent the worst-case scenario and in many of these views only a small proportion of the wind park would be visible, for example the blade-tips or rotors of a few turbines, as illustrated in Viewpoints B, C and G.

1.10 Clear views of Bicker Fen windfarm (or parts of including just the blade tips) are available along approximately 15km of the A17, occurring mainly passing RAF Cranwell (15-20km), approaching Heckington west (7-9km), between Heckington east and Swineshead (within 5km) and intermittently between the A16 and Swineshead (5-15km), representing around 40.8% of the route. Visibility of both the proposed development and Bicker Fen windfarm would occur along approximately 11.5km of the route passing RAF Cranwell (15-20km) approaching Heckington West (7-9km), between Heckington east and Swineshead (within 5km) and intermittently between the A16 and Swineshead (5-15km), representing about 31.3% of the route. These figures are based on the worst-case visibility and do not take into account incidental vegetation and built form between the viewpoint and both wind energy schemes. It is therefore likely, and consistent with observation in the field, that actual visibility of both Bicker Fen and the application proposal would be significantly less than the above visibility analysis suggests.

1.11 The A17 Visibility Analysis indicates there is, or would be, negligible or no visibility of Bicker Fen windfarm and the proposed wind park from 11.5km / 31% of the route. This would be the case passing north of Sleaford (north west to north east) and north of Heckington due to roadside planting and associated earthworks. Fieldwork also indicates that where views of Bicker Fen windfarm and the application proposal do occur they are / would be often intermittent and fragmented. In addition, in close to medium range views (less than 5km from the application site) the two wind energy schemes would generally not be seen in the same 70 degree field of view – see Viewpoints E and F, but would be seen 'in succession' (the observer would have to turn her / his head to see one or other of the schemes).

1.12 As requested and agreed with North Kesteven District Council, an assessment of the potential effect of the application proposal on views from / the visual amenity of the A17 for seven representative additional viewpoints along the route between RAF Cranwell in the west and the A16 intersection to the south east is set out in the two visual assessment schedules provided: **Schedule 1** assesses the proposed wind park on its own merit; **Schedule 2** assesses the potential cumulative effect of the proposed development in conjunction with Bicker Fen windfarm.

1.13 This reassessment of the A17 concludes that in general the proposed Heckington Fen Wind Park would have a moderate or lower effect on views from, and the visual amenity of, the road between RAF Cranwell and the A16 intersection which would not be significant in terms of the EIA Regulations. The exception to this would be passing the application site at East Heckington, within approximately 1km of the nearest proposed turbine, where the predicted visual effect is assessed as moderate / major, as and set out in the 2011 ES LVIA. At distances over 1km the level of visual effect would be moderate or less, diminishing with distance, and vary according to the amount of visibility afforded from the route which is dependent on roadside planting and intervening vegetation and buildings as shown in the visualisations (A-G) in **Figure 2** and the A17 visibility analysis information at **Figure 4** of this document. As a general rule moderate to minor level effects would arise on the A17 within about 2-5km of the application proposal, and minor to negligible level effects at distances over approximately 5km. **Schedule 1** indicates the level of predicted effect at the additional photomontage viewpoints (A-G) along the A17 resulting from implementation of the proposed wind park.

1.14 Regarding cumulative effects and Bicker Fen windfarm, the proposed Heckington Fen Wind Park would cause a minor / moderate or lower effect on the visual amenity of the A17 between RAF Cranwell and the A16 intersection which would not be significant in EIA terms. The reason for this is because the large scale, man-made character of the fenland landscape has the capacity to accommodate both Bicker Fen windfarm and the application proposal, and the separation distance in excess of 5km between the two schemes would enable the proposed wind park to be implemented without causing significant cumulative landscape and visual effects. **Schedule 2** gives the level of predicted effect at the additional photomontage viewpoints (A-G) along the A17 resulting from implementation of the proposed wind park.

South Kyme and Helpringham

1.15 As requested by North Kesteven District Council the assessment of views from / visual amenity of South Kyme and Helpringham was reviewed with particular reference to Photomontages 6 and 13. The following additional summary assessment is provided for clarification purposes and is applicable to both South Kyme and Helpringham, drawing on clarification assessments provided in **Schedule 1** and **Schedule 2** of this document.

1.16 The proposed Heckington Fen Wind Park and Bicker Fen windfarm are both located in The Fens (NCA 46) which also form the landscape context of South Kyme and Helpringham settlements. The Fens / Fenland is a large scale, man-made landscape which best practice guidance[1] indicates has the ability to accommodate large scale wind energy development of the type proposed. There are both natural and developed features in the Fenland landscape which would assist in assimilating the proposed wind park into the landscape, including high voltage transmission lines and pylons. These factors and the huge skies and expansive nature of the Fenland limit the magnitude of visual impact at Helpringham and South Kyme to low, thus producing the minor / moderate level of effects recorded in the LVIA, as set out with further clarification at **Schedule 1** and **Schedule 2**.

Conclusion

1.17 This Landscape Clarification Statement provides additional information on the potential landscape and visual effects of the proposed Heckington Fen Wind Park having regard for the operational Bicker Fen windfarm. Having reviewed the original submission and reassessed views from the A17 road and South Kyme and Helpringham the statement arrives at the same conclusions as the 2011 ES LVIA.

Gavin David *CMLI* ***7th December 2011***

[1] Scottish Natural Heritage (2009) 'Design of Windfarms in the Landscape: Version 1'

SCHEDULE 1: VISUAL ASSESSMENT OF ADDITIONAL PHOTOMONTAGE VIEWPOINTS

1.1 This schedule assesses the predicted residual visual effects in relation to the relevant photomontage viewpoints below (two original submission and seven additional viewpoints for clarification) and should be read in conjunction with **Figure 1: Additional Photomontages / Photowirelines and Wirelines** and **Figure 4: A17 Visibility Analysis** of the Landscape Clarification Statement and **Figure 5.11: Photomontages and Wirelines** and **Figure 5.14: Cumulative Assessment Wirelines** of the 2011 ES.

Photo Ref	Viewpoint Location	OS Grid Reference	AOD (m)	LPA	Receptor Type(s)	Distance to nearest turbine (km)	Description of Existing View	Description of Predicted Change *	Degree of Predicted Residual Change *		
									Sensitivity of Receptor	Magnitude of Change	Significance of Change
Original Photomontages											
6	South Kyme	517343 349541	5	North Kesteven	Public Highway / Dwelling	3.88	A southward view from Cow Drove looking across the broad, level fenland (NCA 46: The Fens / NKDC LCA 13: Fenland), representative of the prospect from dwellings at the southern edge of South Kyme. Several woodland blocks in the middle ground break up the open vista to produce a varied skyline punctuated by occasional tree and hedge planting and built elements including Bicker Fen Windfarm. *Clarification Assessment* Bicker Fen windfarm is located to the left of the isolated dwelling on the right of the frame in the foreground, beyond the outbuildings, garden vegetation and woodland in the background and on the skyline, as annotated on the amended photomontage provided; the position and relative size and scale of Bicker Fen windfarm is shown in Cumulative Wireline 6 as reproduced in the accompanying amended wireline.	The proposed wind park would be visible at medium range occupying about 25% of the 70 degree field of view. Taking account of the large scale, expansive character of the Fens, combined with the sense of separation provided by the open foreground, the interruption of visibility by the farm woodlands, and the upstanding built features in view (eg. high voltage transmission lines and pylons and Bicker Fen Windfarm) the predicted magnitude of visual change would be on the lower side of 'medium'. *Clarification Assessment* Observers would generally experience a medium magnitude of change to views and visual amenity – project components are relatively prominent in the landscape, tending to appear in equilibrium with the landscape characteristics in view, which include large scale fields and woodland blocks, and huge skies – easily noticed in the wider landscape and views.	High	Medium	Moderate
13	Helpringham, B1394	514310 340814	7	North Kesteven	Public Highway / Dwelling # (PRoW)	7.16	A north east view from Helpringham looking across the Southern Lincolnshire Edge (NCA 47) / Central Clays and Gravels (NKDC LCA 11) character areas, representative of views from exposed properties at the eastern edge of the village. Here the subtle undulating topography of the fenland fringe gives way to open Fens (NCA 46) with its characteristic occasional tree / hedge cover and built elements including dispersed housing / farmsteads, electricity transmission infrastructure and Bicker Fen Windfarm. These varied upstanding features interrupt the otherwise extensive views. *Clarification Assessment* Bicker Fen windfarm is located to the right of the frame in amongst the high voltage electricity transmission lines / pylons, as annotated on the original photomontage; the position and relative size and scale of Bicker Fen windfarm is shown in Cumulative Wireline 13 as reproduced in the accompanying amended photomontage and wireline.	The proposed wind park (or parts of) would be visible at medium to long range extending across approximately 15% of the 70 degree field of view. Having regard for the man made character of the Fens , the expansive nature of views, the partial interruption of visibility by vegetation and the built structures in view, the magnitude of visual change at this point is predicted to be low. It should be noted that dwellings within Helpringham village (lying immediately to the west and south of this viewpoint), which generally enjoys has a higher degree of enclosure, would be subject to lower magnitude visual change. *Clarification Assessment* Observers would generally experience a low magnitude of change to views and visual amenity – project components are present in the landscape, but tend to appear as background components of views, which include large scale fields, tree belts / woodland blocks and high voltage electricity transmission lines / pylons, Bicker Fen windfarm and huge skies – easily go unnoticed in the wider landscape and views.	High	Low	Minor / Moderate
Additional Photomontages for Clarification											
A	A17 RAF Cranwell	499708 348803	71	North Kesteven	Public highway (A17)	20.00	Expansive eastward looking view from A17 at B1429 intersection adjacent to RAF Cranwell. A17 is relatively open along this stretch affording long views across the Central Plateau – Limestone Heath (Southern Lincolnshire Edge – NCA 47) character area towards the application site. Bicker Fen windfarm is screened by roadside planting at this location but may be visible obliquely at intervals at a similar separation distance to Heckington Fen Wind Park.	The proposed wind park would be visible obliquely to the route alignment at approximately 20km distance beyond the partly wooded skyline. The wind energy scheme would represent a small element in the broad landscape. The distant, glimpsed nature of views from the route and the very low level of visual change involved would restrict impacts to very low magnitude giving rise to negligible visual effect at this low sensitivity receptor.	Low	Very Low	Negligible
B	A17 Sleaford north	506780 347380	15	North Kesteven	Public highway (A17)	12.83	Channelled view looking east from the A17 layby (eastbound)north of Sleaford. Visibility from this section of the A17 is restricted due to roadside planting and the	The proposed wind park would be partly visible aligned to the A17 at a distance of 13km situated beyond and partially screened by the background vegetation. Where visible the	Low	Very Low	Negligible

Photo Ref	Viewpoint Location	OS Grid Reference	AOD (m)	LPA	Receptor Type(s)	Distance to nearest turbine (km)	Description of Existing View	Description of Predicted Change *	Degree of Predicted Residual Change *		
									Sensitivity of Receptor	Magnitude of Change	Significance of Change
							woodland within the surrounding Central Plateau – Limestone Heath (Southern Lincolnshire Edge) character area. Bicker Fen windfarm is screened by roadside planting and intervening vegetation at this location but may be intermittently visible at a similar distance, obliquely to the road alignment, between gaps in roadside planting.	wind energy scheme would appear as a small element in the wider landscape. The glimpsed and relatively distant nature of views from this stretch of the route, and the low levels of visual change involved would limit impacts to very low magnitude causing negligible visual effect at this low sensitivity receptor.			
C	A17 Sleaford east	508943 346413	14	North Kesteven	Public highway (A17)	10.63	View from footpath adjacent to the east of the A17,representative of glimpsed views between gaps in vegetation – there is no visibility from road itself along this stretch due to continuous roadside planting. Views are also interrupted by the woodland within the surrounding Central Plateau – Central Clays and Gravels (Southern Lincolnshire Edge) character area. Bicker Fen windfarm is visible about 12km away to the south east beyond the vegetated skyline, which includes the A17 roadside planting.	Heckington Fen Wind Park would be visible to the east at a distance of approximately 10km. The application proposal would have a weak presence in views due to the wooded character of the fenland fringe landscape. The glimpsed and medium range nature of views from this section of road, and the anticipated low level of visual change would restrict impacts to very low magnitude giving rise to negligible visual effect at this low sensitivity receptor.	Low	Very Low	Negligible
D	A17 Heckington west	512649 344649	6	North Kesteven	Public highway (A17)	7.02	View looking east from A17 at junction with Boston Road, channelled by roadside planting in foreground. Visibility from this section of the A17 is restricted due roadside planting and the woodland within the surrounding Central Plateau – Central Clays and Gravels (Southern Lincolnshire Edge) character area. Bicker Fen windfarm is screened by intervening vegetation at this location but may be visible obliquely at intervals between gaps in the roadside planting at a similar distance.	The proposed wind park would be partly visible aligned to the road at 7km distance situated beyond and screened by the vegetated skyline and foreground planting. The wind energy schemes would appear as a relatively small, compact element in the landscape. The separation distance involved, glimpsed nature of the view and the low level of visual change predicted would limit impacts to very low magnitude which would cause a negligible cumulative effect at this low sensitivity receptor.	Low	Very Low	Negligible
E	A17 Heckington east	515900 344145	6	North Kesteven	Public highway (A17)	3.99	Open, expansive view looking east along the A17 from the junction with Boston Road. Visibility is relatively unrestricted from the A17 at this point due to the open character of the Fenland (The Fens – NCA 46). Bicker Fen windfarm is also visible to the south at a distance of about 5km.	The proposed Heckington Fen Wind Park would be visible towards the east, seen obliquely to the road alignment at 3.5km distance situated beyond the electricity transmission lines / pylons. The wind energy scheme would appear as compact element in the landscape in equilibrium with the other elements in view. The separation distance involved and the relatively low level of visual change predicted would restrict impacts to low to medium magnitude, giving rise to a minor visual effect at this low sensitivity receptor.	Low	Low to Medium	Minor
F	A17 Swineshead	522732 341016	3	Boston	Public highway (A17)	4.29	Open view looking north west along the A17 in the vicinity of Swineshead, the periphery of which is visible on the right of the frame. Visibility from the road is relatively unrestricted from the A17 at this point due to the open character of the Fenland (The Fens – NCA 46). Bicker Fen windfarm is also visible to the south west at a distance of about 3.5km.	The proposed Heckington Fen Wind Park would be visible beyond the contemporary commercial and farm buildings in the foreground, occupying about XXX% of the 70 degree field of view, aligned to the route at 4.5km distance. The wind energy scheme would appear as a reasonably compact landscape feature in equilibrium with the other elements in view. The separation distance involved and the limited level of visual change expected would restrict impacts to low to medium magnitude, giving rise to a minor visual effect at this low sensitivity receptor.	Low	Low to Medium	Minor
G	A17 Hoffleet Stow	524556 337338	5	Boston	Public highway (A17)	8.40	A north west view looking across The Fens (NCA 46) / Bicker to Wyberton Settled Fen (BDC LCA B1) character area(s). The flat, settled fenland is semi-enclosed by woodland blocks, shelter belts, hedges, and vegetation associated with settlement, such as Hoffleet Stow visible on the right hand side of the frame. Bicker Fen Windfarm can be seen on the wooded skyline towards the left of the photo.	The application proposal would occupy about XXX% of the 70 degree field of view, appearing as a compact element in the landscape, subservient to the other elements in view. The separation distance involved and the low level of visual change predicted would restrict the magnitude of impact to low, giving rise to a negligible / minor visual effect at this low sensitivity receptor.	Low	Low	Negligible / Minor

Notes

* denotes potential residual change to views during construction and operation in good visibility during winter; # denotes representative view.
'field of view' is taken to be a 70° horizontal splay, as depicted in the photomontages, which is representative of human vision looking in any one direction without turning one's head.
'favourable atmospheric conditions' are considered to be when visibility is defined as being 'very good' or 'excellent' based on the Met Office's standard weather forecast terminology.

SCHEDULE 2: CUMULATIVE ASSESSMENT CLARIFICATION

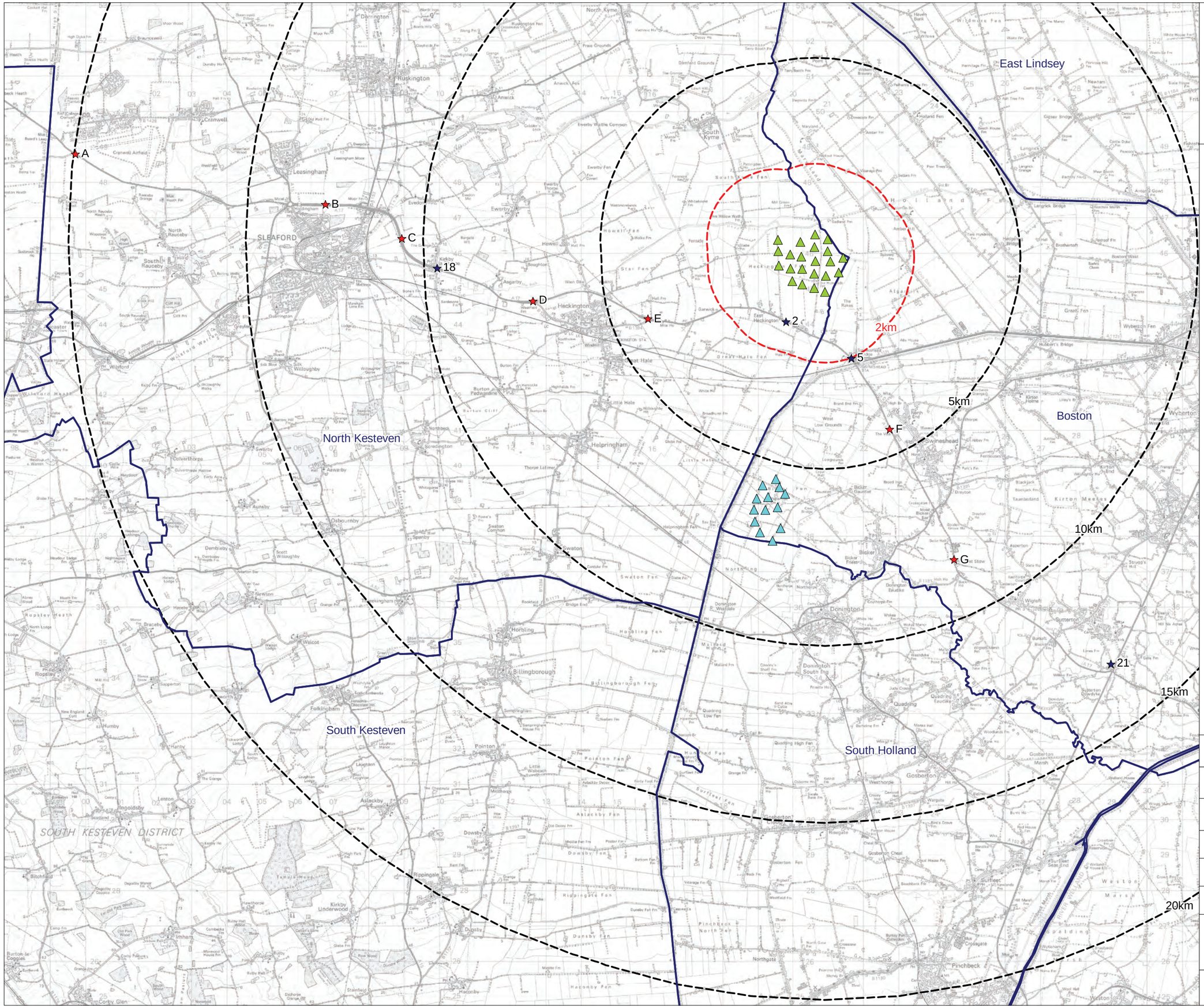
2.1 This schedule summarises the predicted residual cumulative effects in relation to landscape character and views / visual amenity for relevant photomontage viewpoints (two original submission and seven additional viewpoints for clarification) and should be read in conjunction with **Figure 1: Additional Photomontages / Photowirelines and Wirelines** and **Figure 4: A17 Visibility Analysis** of the Landscape Clarification Statement and **Figure 5.11: Photomontages and Wirelines** and **Figure 5.14: Cumulative Assessment Wirelines** of the 2011 ES.

Viewpoint Data			Landscape and Visual Impact Assessment	Residual Cumulative Effect				Significant in EIA terms*	
Photo-montage Ref No	Distance (km) to nearest turbine	Landscape and Visual Receptor	Description of Impact *	Visual Sensitivity of Viewpoint	Nature and Duration of Effect	Magnitude *	Significance *	*at viewpoint Yes/No*	*at nearest exposed receptor ** Yes/No*
Original Photomontages									
6	3.88	South Kyme	Bicker Fen Windfarm (operational) is visible in combination in the background of the view beyond the application proposal approximately 10km to the south of the viewpoint. Billingborough Windfarm (proposed) would be located beyond Bicker Fen about 15km distance and would be barely discernible within the Fens. The other Cumulative Assessment Schemes (CAS) would generally not be visible in combination or succession from this viewpoint or would have a negligible presence in views due to the fenland landscape context and separation distances involved. See **Cumulative Wireline 6.** *Clarification Assessment* Cumulative Wireline 6 shows the relative scale of Bicker Fen windfarm and the proposed wind park. The relatively distant location of Bicker Fen windfarm (10km), situated beyond the woodland blocks and high voltage pylon run, compared with the application proposal (4km), combined with the expansive, large scale character of the fenland, would limit the level of cumulative impact caused by implementation of Heckington Fen Wind Park to low magnitude, giving rise to a minor / moderate cumulative effect at this high sensitivity receptor which is representative of exposed dwellings at the southern edge of South Kyme.	High	Permanent (25 yrs) Reversible	Low	Minor / Moderate	No	No
13	7.16	Helpringham, B1394	Bicker Fen Windfarm (operational) is visible to the east in combination with the application proposal which at 7km distance appears slightly closer to the viewpoint (to the north east) compared with 10km. Billingborough Windfarm (proposed) would be situated farther way to the south about 17km distance barely discernible due to the fenland fringe context. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible presence in views due to the wider landscape context and separation distances involved. See **Cumulative Wireline 13**. *Clarification Assessment* Cumulative Wireline 13 shows the relative scale of Bicker Fen windfarm and the proposed wind park. The closer proximity (5km) and higher degree of visual exposure of Bicker Fen windfarm compared with the application proposal (7km) which is situated beyond the tree belt and high voltage pylon run, combined with the relatively wide separation between the two schemes and expansive, large scale fenland character, restricts the level of cumulative impact that would result from implementing Heckington Fen Wind Park to low magnitude, causing a minor / moderate cumulative effect at this high sensitivity receptor which is representative of exposed dwellings at the eastern edge of Helpringham.	High	Permanent (25 yrs) Reversible	Low	Minor / Moderate	No	No
Additional Photomontages for Clarification									
A	20.00	A17 RAF Cranwell	Expansive eastward view from A17 at B1429 intersection across the Central Plateau – Limestone Heath (Southern Lincolnshire Edge – NCA 47) character area in which the proposed wind park would be visible obliquely to the route alignment at 20km distance beyond the partly wooded skyline; Bicker Fen windfarm is screened by roadside planting at this location but may be visible obliquely at intervals at a similar distance, sometimes seen in combination with Heckington Fen Wind Park. When and where visible in favourable conditions both wind energy schemes would represent small elements in the wider landscape. The distant, glimpsed nature of views from the route, and the very low levels of visual change involved would restrict cumulative impacts to very low magnitude giving rise to negligible cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either negligible / minor, or minor respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Very Low	Negligible	No	No
B	12.83	A17 Sleaford north	Channelled view from A17 layby looking east across the Central Plateau – Limestone Heath (Southern Lincolnshire Edge – NCA 47) character area. Proposed wind park would be aligned to the road at 13km distance sited beyond and screened by the vegetated skyline; Bicker Fen windfarm is screened by roadside planting and intervening vegetation at this location but may be visible at intervals, obliquely to the road alignment, between gaps in the roadside planting at a similar distance. Visibility from the A17 is restricted due to roadside planting and the wooded character of the fenland fringe / Southern Lincolnshire Edge. When and where visible in combination, both wind energy schemes would appear as small elements in the wider landscape. The glimpsed and relatively distant nature of views from this stretch of the route, and the low levels of visual change involved would limit cumulative impacts to very low magnitude causing negligible cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either negligible / minor, or minor respectively, and not significant in EIA terms.	Low	Permanent (25 yrs) Reversible	Very Low	Negligible	No	No

			The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.					
C	10.63	A17 Sleaford east	View across the surrounding Central Plateau – Central Clays and Gravels (Southern Lincolnshire Edge – NCA 47) from footpath adjacent to the east of the A17 (no visibility from road itself due to continuous roadside planting), representative of glimpsed views between gaps in vegetation. Bicker Fen windfarm (operational) is visible obliquely to the route alignment seen in combination with the application proposal to the south east beyond the vegetated skyline about 12km away, which includes the A17 planting. Heckington Fen Wind Park would be visible to the east at a distance of approximately 10km. Both schemes do / would have a weak presence in views due to the wooded character of the fenland fringe / Southern Lincolnshire Edge. The glimpsed and medium range nature of views from this section of road, and the anticipated low levels of visual change would restrict cumulative impacts to very low magnitude giving rise to negligible cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either negligible / minor, or minor respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Very Low	Negligible	No	No
D	7.02	A17 Heckington west	Channelled view from A17 at junction with Boston Road looking east across the Central Plateau – Central Clays and Gravels (Southern Lincolnshire Edge – NCA 47) character area. Proposed wind park would be aligned to the road at 7km distance sited beyond and screened by the vegetated skyline and foreground; Bicker Fen windfarm is screened by intervening vegetation at this location but may be visible obliquely, in combination at intervals between gaps in the roadside planting at a similar distance. Visibility is restricted from the A17 due roadside planting and the wooded character of the fenland fringe. When and where visible in combination, both wind energy schemes would appear as relatively small, compact elements in the landscape. The separation distances involved, glimpsed nature of views from this stretch of the route and the low levels of visual change predicted would limit cumulative impacts to very low magnitude which would cause a negligible cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either negligible / minor, or minor respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Very Low	Negligible	No	No
E	3.99	A17 Heckington east	Open view looking east along the A17 from the junction with Boston Road. The proposed Heckington Fen Wind Park would be visible obliquely to the road at 3.5km distance sited beyond the electricity transmission lines / pylons; Bicker Fen windfarm is also visible in succession to the south at a distance of about 5km. Visibility is relatively unrestricted from the A17 at this point due to the open character of the Fenland (The Fens – NCA 46). Both wind energy schemes would appear as compact elements in the landscape, subservient to, or in equilibrium with, other elements in view. The separation distances involved and the relatively low level of visual change predicted would restrict cumulative impacts to low magnitude, giving rise to a negligible / minor cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either minor, or minor / moderate respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Low	Negligible / Minor	No	No
F	4.29	A17 Swineshead	Open view looking north west along the A17 passing Swineshead. The proposed Heckington Fen Wind Park would be visible aligned to the route at 4.5km distance located beyond the contemporary commercial and farm buildings in the foreground; Bicker Fen windfarm is also visible in succession to the south west at a distance of about 3.5km. Visibility is relatively unrestricted from the A17 at this point due to the open character of the fenland (Bicker to Wyberton Settled Fen – BDC LCA B1 / The Fens – NCA 46). Both wind energy schemes would appear as reasonably compact landscape features in equilibrium with the other elements in view. The separation distances involved and the limited level of visual change expected would restrict cumulative impacts to low magnitude, giving rise to a negligible / minor cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either minor, or minor / moderate respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Low	Negligible / Minor	No	No
G	8.40	A17 Hoffleet Stow	Open view looking north west from the A17 near Hoffleet Stow. The proposed Heckington Fen Wind Park would be visible obliquely to the road alignment at 8km distance sited beyond the wooded skyline; Bicker Fen windfarm is also visible in succession to the west at a distance of about 5km. Visibility is relatively unrestricted from the A17 at this point due to the open character of the fenland (Bicker to Wyberton Settled Fen – BDC LCA B1 / The Fens – NCA 46). Both wind energy schemes would appear as compact elements in the landscape, subservient to the other elements in view. The separation distances involved and the low level of visual change predicted would restrict cumulative impacts to very low magnitude, giving rise to a negligible cumulative effect at this low sensitivity receptor. Should the Council consider the A17 to be either medium or high visual sensitivity, which would be a departure from standard practice, the cumulative effect at this general location would be either negligible / minor, or minor respectively, and not significant in EIA terms. The other CAS would generally not be visible in combination or succession from this viewpoint or would have a negligible or low presence in views due to the wider landscape context and separation distances involved.	Low	Permanent (25 yrs) Reversible	Very Low	Negligible	No	No

Notes

* denotes potential residual change to views during construction and operation in good visibility during winter attributable to implementing Heckington Fen Wind Park.
** high sensitivity receptors such as residential properties and PRoW situated at a similar distance from the nearest proposed turbine where uninterrupted views are available from front / main elevations.



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Russell Street
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GL5 3AX
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Legend

- Heckington Fen Turbine Location
- Bicker Fen Turbine Location
- 2km Distance Band
- 5km Distance Band
- Local Planning Authority Boundary
- Additional Photomontage/Photowireline Viewpoint Location (A - G)
- ES Photomontage Viewpoint Location (2, 5, 18 and 21)

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N, W, E, S

Document Number: 4038_T0380_01

Date: December 2011

Scale: 1: 100,000 @ A3

Figure: 1

Title: Additional Viewpoint Locations

Heckington Fen Wind Park
Further Environmental Information

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OS Reference: 508943, 346413
Ground Level Elevation: 14m AOD
Bearing to Site Centre: 93° (E)
Distance to Nearest Turbine: 10.62km

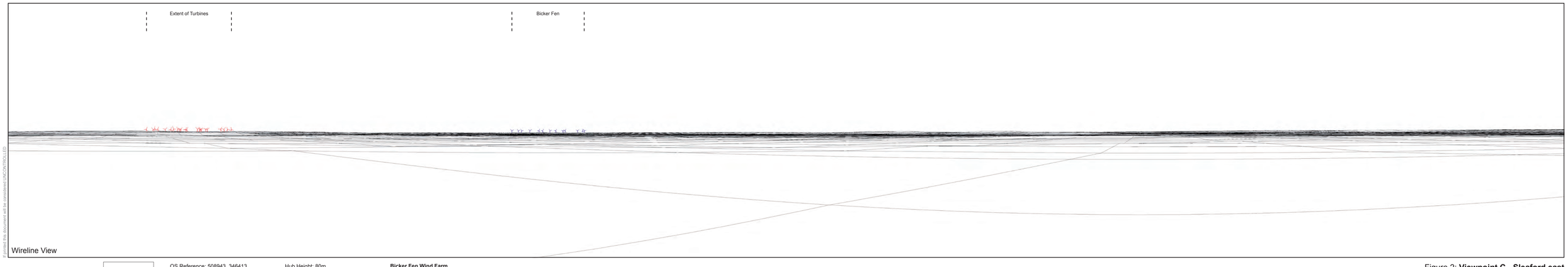
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 14:45
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 12.34km
Bearing to Site Centre: 126° (SE)

Figure 2: **Viewpoint C - Sleaford east**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01



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OS Reference: 508943, 346413
Ground Level Elevation: 14m AOD
Bearing to Site Centre: 93° (E)
Distance to Nearest Turbine: 10.62km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Bicker Fen Wind Farm
Distance to Turbine: 12.34km
Bearing to Site Centre: 126° (SE)

Figure 2: **Viewpoint C - Sleaford east**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01

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Approved by:	

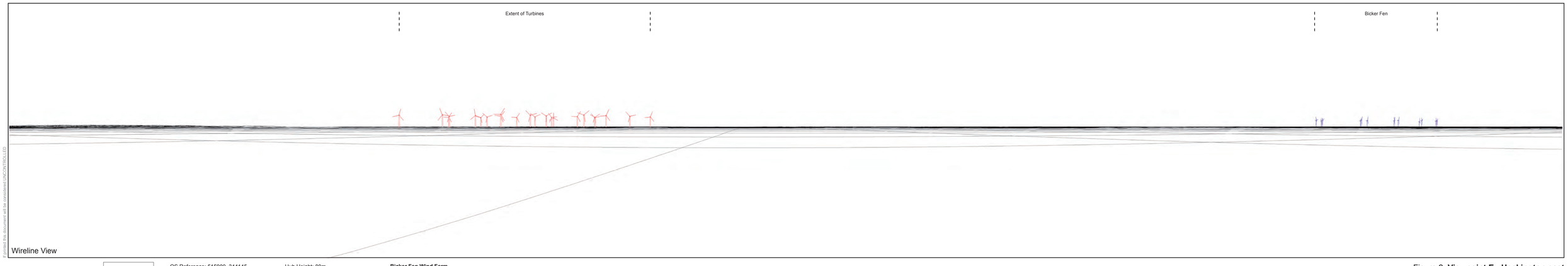
OS Reference: 515900, 344145
Ground Level Elevation: 6m AOD
Bearing to Site Centre: 71° (ENE)
Distance to Nearest Turbine: 3.99km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 12:13
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 5.72km
Bearing to Site Centre: 148° (SSE)

Figure 2: **Viewpoint E - Heckington east**
Project: **Heckington Fen Wind Park**
Document Number: 4038_T0378_01



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Drawn by:	
Checked by:	
Approved by:	

OS Reference: 515900, 344145
Ground Level Elevation: 6m AOD
Bearing to Site Centre: 71° (ENE)
Distance to Nearest Turbine: 3.99km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Bicker Fen Wind Farm
Distance to Turbine: 5.72km
Bearing to Site Centre: 148° (SSE)

Figure 2: **Viewpoint E - Heckington east**
Project: **Heckington Fen Wind Park**
Document Number: 4038_T0378_01

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Drawn by:	
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OS Reference: 522732, 341016
Ground Level Elevation: 3m AOD
Bearing to Site Centre: 335° (NNW)
Distance to Nearest Turbine: 4.29km

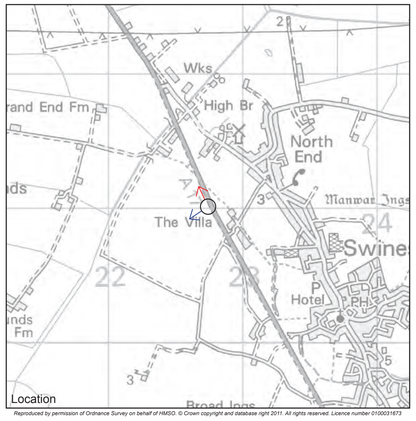
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

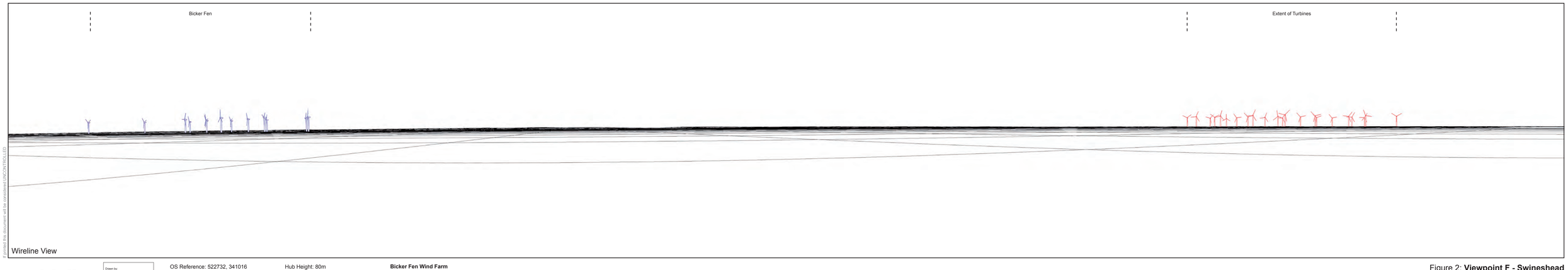
Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 11:34
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 3.48km
Bearing to Site Centre: 236° (SW)

Figure 2: **Viewpoint F - Swineshead**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01





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Approved by:	

OS Reference: 522732, 341016
Ground Level Elevation: 3m AOD
Bearing to Site Centre: 335° (NNW)
Distance to Nearest Turbine: 4.29km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Bicker Fen Wind Farm
Distance to Turbine: 3.48km
Bearing to Site Centre: 236° (SW)

Figure 2: **Viewpoint F - Swineshead**
Project: **Heckington Fen Wind Park**

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Approved by:	

OS Reference: 524556, 337338
Ground Level Elevation: 5m AOD
Bearing to Site Centre: 334° (NNW)
Distance to Nearest Turbine: 8.40km

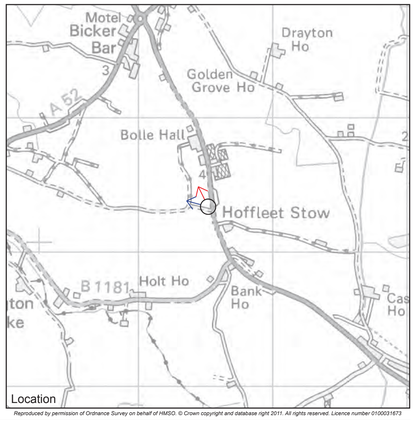
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

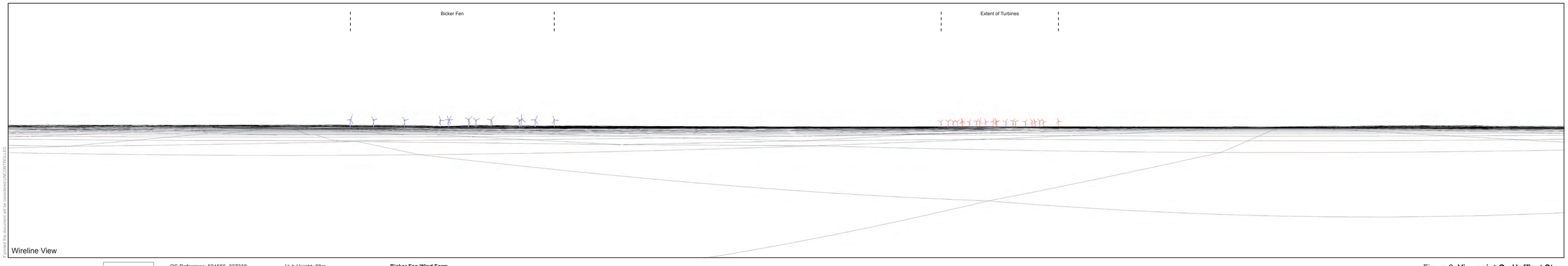
Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 10:57
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 4.98km
Bearing to Site Centre: 285° (WNW)

Figure 2: **Viewpoint G - Hoffleet Stow**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01





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Approved by:	

OS Reference: 524556, 337338
Ground Level Elevation: 5m AOD
Bearing to Site Centre: 334° (NNW)
Distance to Nearest Turbine: 8.40km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 140°
Viewing Distance: 330mm

Bicker Fen Wind Farm
Distance to Turbine: 4.98km
Bearing to Site Centre: 285° (WNW)

Figure 2: **Viewpoint G - Hoffleet Stow**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01

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Approved by:	

OS Reference: 499708, 348803
Ground Level Elevation: 71m AOD
Bearing to Site Centre: 98^0 (E)
Distance to Nearest Turbine: 20.00km

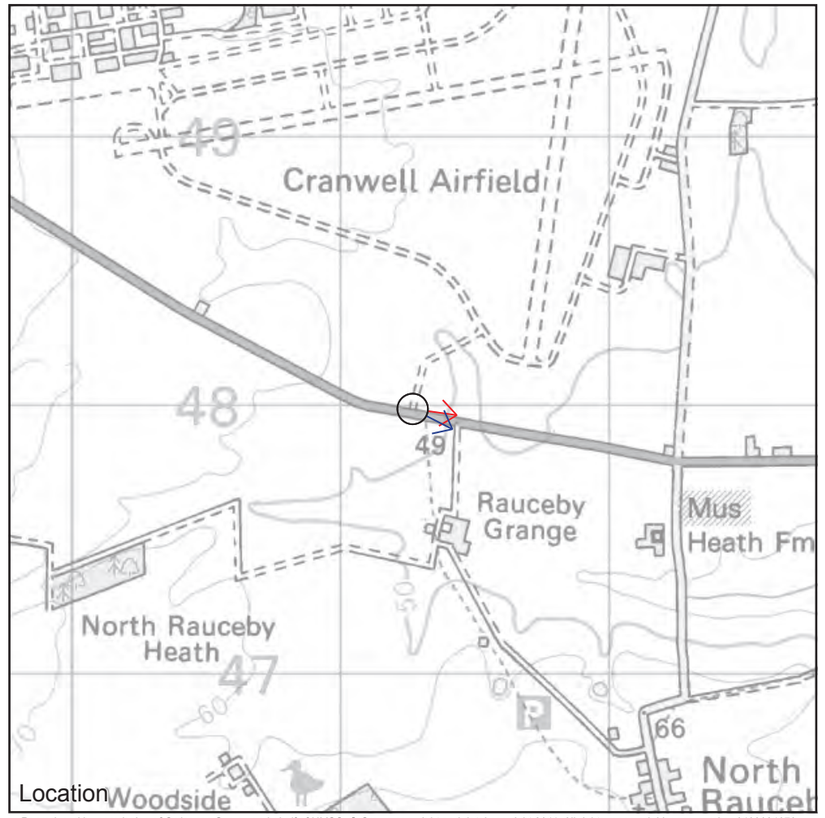
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

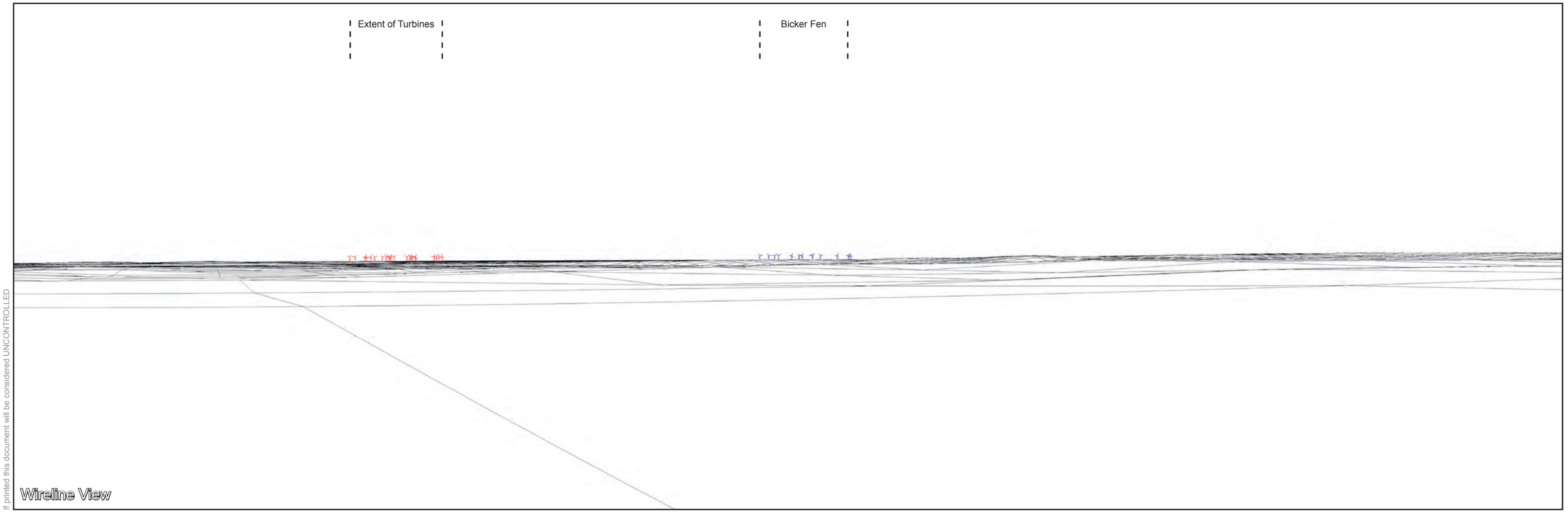
Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 14:05
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 21.52km
Bearing to Site Centre: 117^0 (ESE)

Figure 2: **Viewpoint A - RAF Cranwell**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01





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Approved by:	

OS Reference: 499708, 348803
Ground Level Elevation: 71m AOD
Bearing to Site Centre: 98^0 (E)
Distance to Nearest Turbine: 20.00km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

Bicker Fen Wind Farm
Distance to Turbine: 21.52km
Bearing to Site Centre: 117^0 (ESE)

Figure 2: **Viewpoint A - RAF Cranwell**
Project: **Heckington Fen Wind Park**

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Approved by:	

OS Reference: 506780, 347380
Ground Level Elevation: 15m AOD
Bearing to Site Centre: 97^0 (E)
Distance to Nearest Turbine: 12.83km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 14:29
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 14.66km
Bearing to Site Centre: 125^0 (SE)

Figure 2: **Viewpoint B - Sleaford north**
Project: **Heckington Fen Wind Park**

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Drawn by:	
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Approved by:	

OS Reference: 506780, 347380
Ground Level Elevation: 15m AOD
Bearing to Site Centre: 97^0 (E)
Distance to Nearest Turbine: 12.83km

Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

Bicker Fen Wind Farm
Distance to Turbine: 14.66km
Bearing to Site Centre: 125^0 (SE)

Figure 2: **Viewpoint B - Sleaford north**
Project: **Heckington Fen Wind Park**

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Approved by:	

OS Reference: 512649, 344649
Ground Level Elevation: 6m AOD
Bearing to Site Centre: 82^0 (E)
Distance to Nearest Turbine: 7.02km

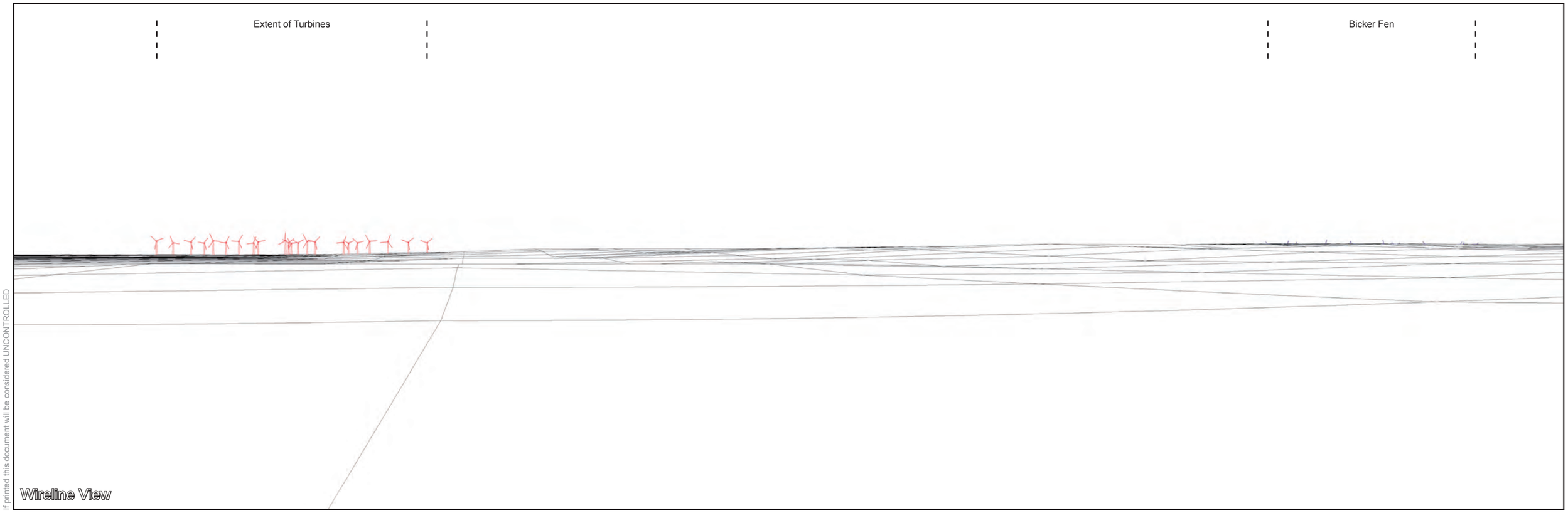
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

Camera Lens: 50mm
Camera/Viewer Height: 1.7m
Date of Photograph: 30-Nov-11, 12:51
Number of Turbines: 22

Bicker Fen Wind Farm
Distance to Turbine: 8.31km
Bearing to Site Centre: 131^0 (SE)

Figure 2: **Viewpoint D - Heckington west**
Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01



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OS Reference: 512649, 344649
Ground Level Elevation: 6m AOD
Bearing to Site Centre: 82^0 (E)
Distance to Nearest Turbine: 7.02km

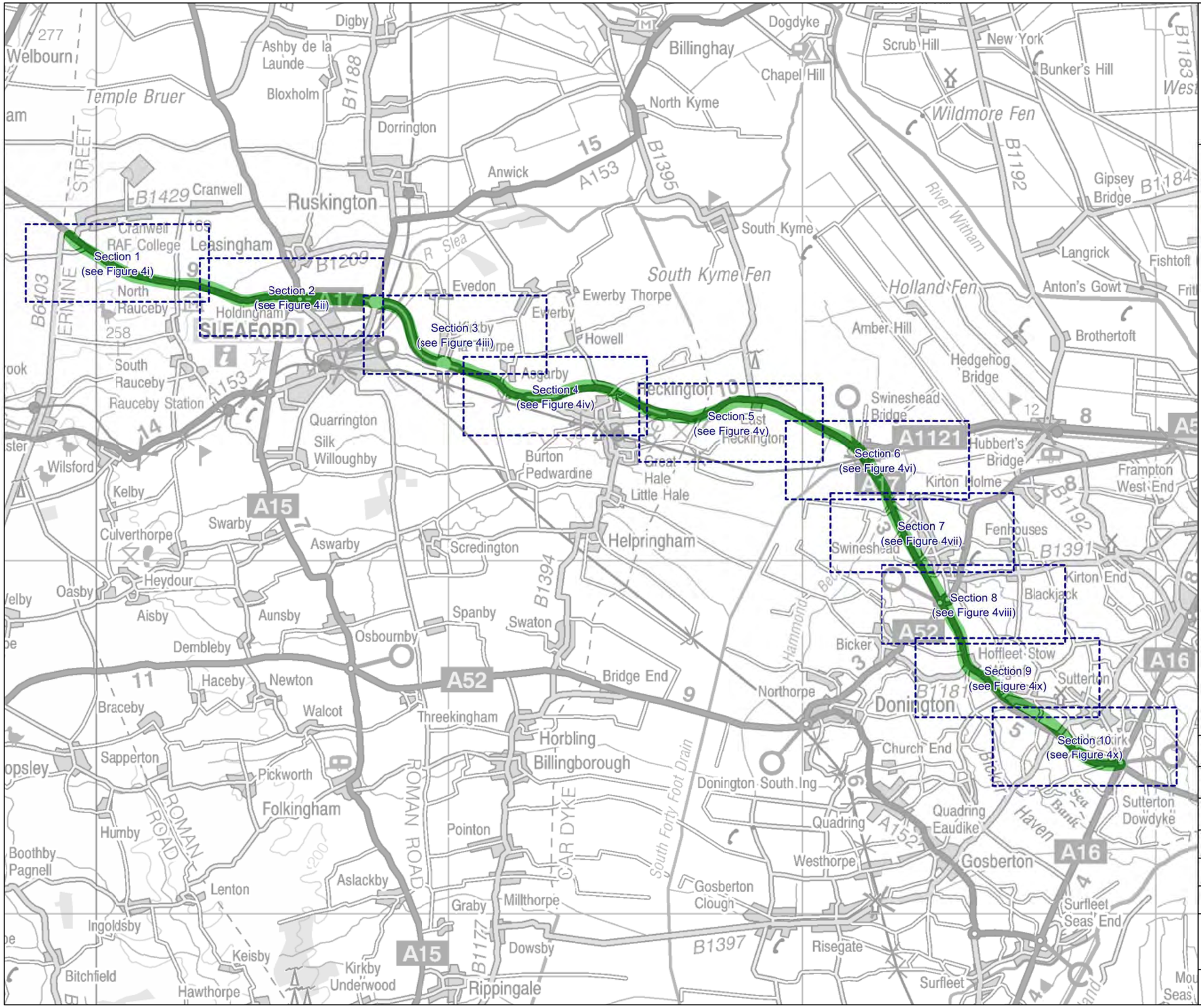
Hub Height: 80m
Maximum Tip Height: 125m
Horizontal Field of View: 70^0
Viewing Distance: 330mm @ A3

Bicker Fen Wind Farm
Distance to Turbine: 8.31km
Bearing to Site Centre: 131^0 (SE)

Figure 2: **Viewpoint D - Heckington west**

Project: **Heckington Fen Wind Park**

Document Number: 4038_T0378_01



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Legend

- Section Inset Figure Reference
- A17

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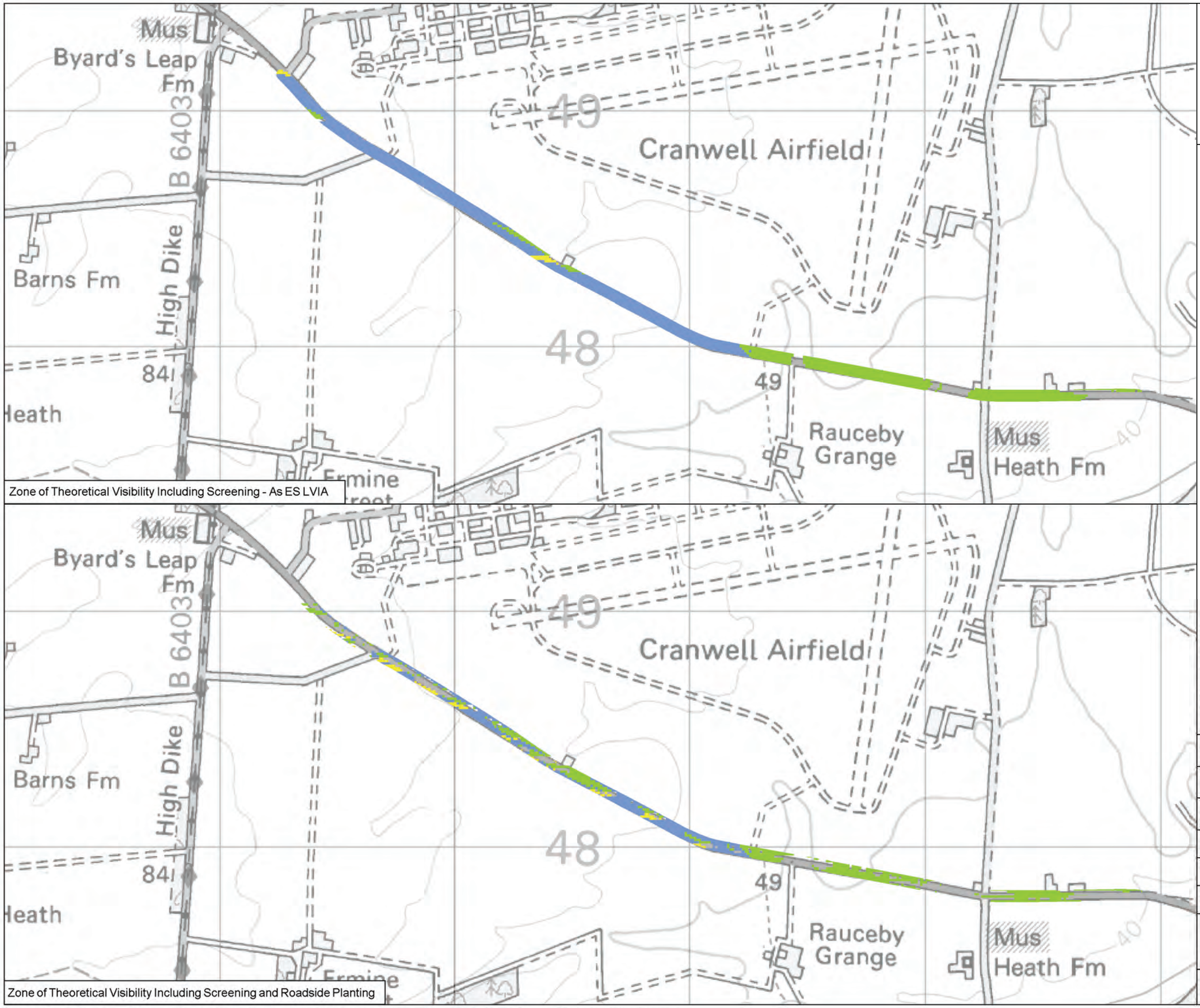
Scale: 1: 100,000 @ A3

Figure: 3

Title: A17 Visibility Analysis - Overview

Heckington Fen Wind Park
Further Environmental Information



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GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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Figure: 4i

Title: A17 Visibility Analysis - Section 1

Heckington Fen Wind Park
Further Environmental Information

Zone of Theoretical Visibility Including Screening - As ES LVIA

Zone of Theoretical Visibility Including Screening and Roadside Planting

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Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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Date: December 2011

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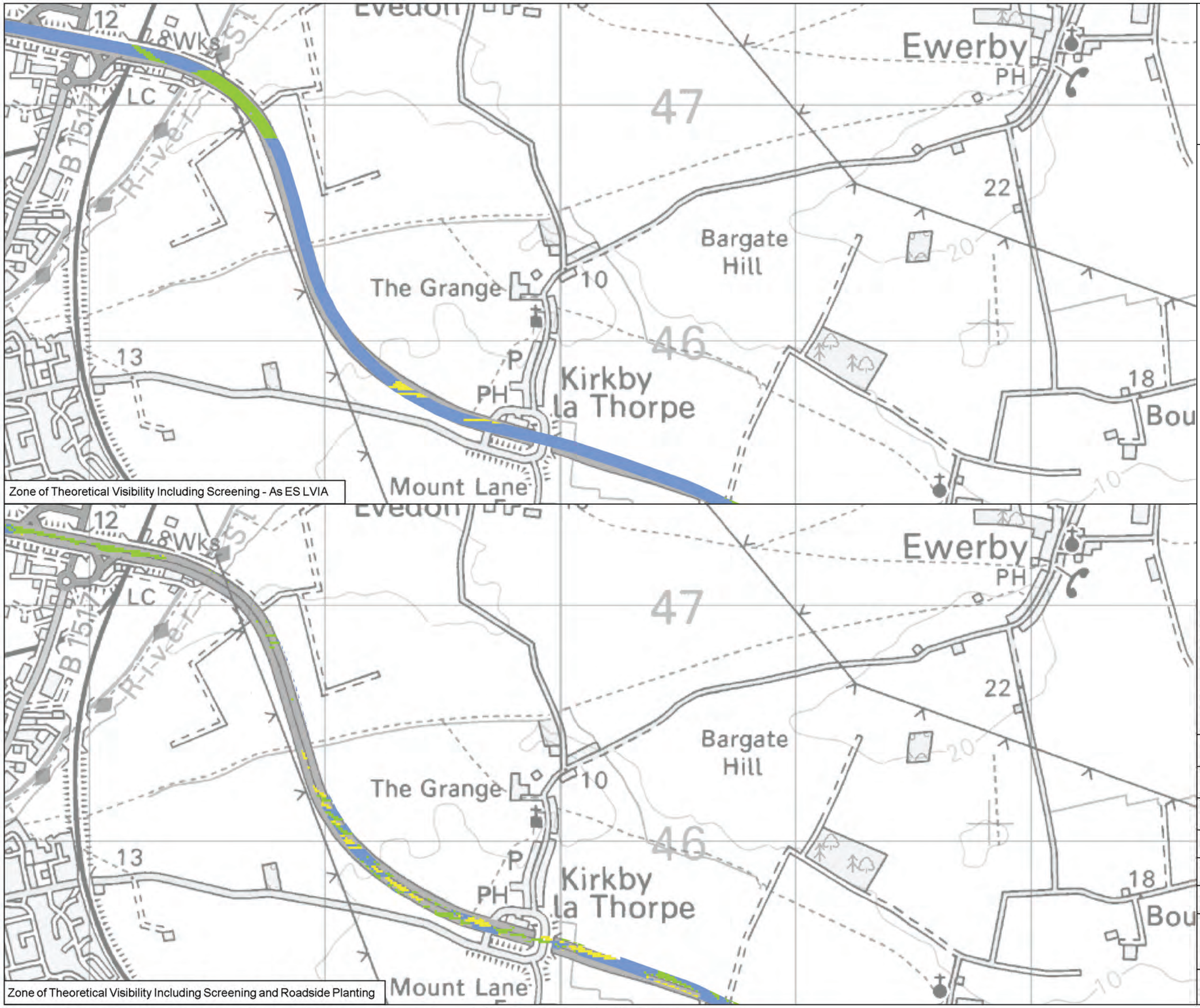
Figure: 4ii

Title: A17 Visibility Analysis - Section 2

Heckington Fen Wind Park
Further Environmental Information



Zone of Theoretical Visibility Including Screening - As ES LVIA

Zone of Theoretical Visibility Including Screening and Roadside Planting

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Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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N W E S

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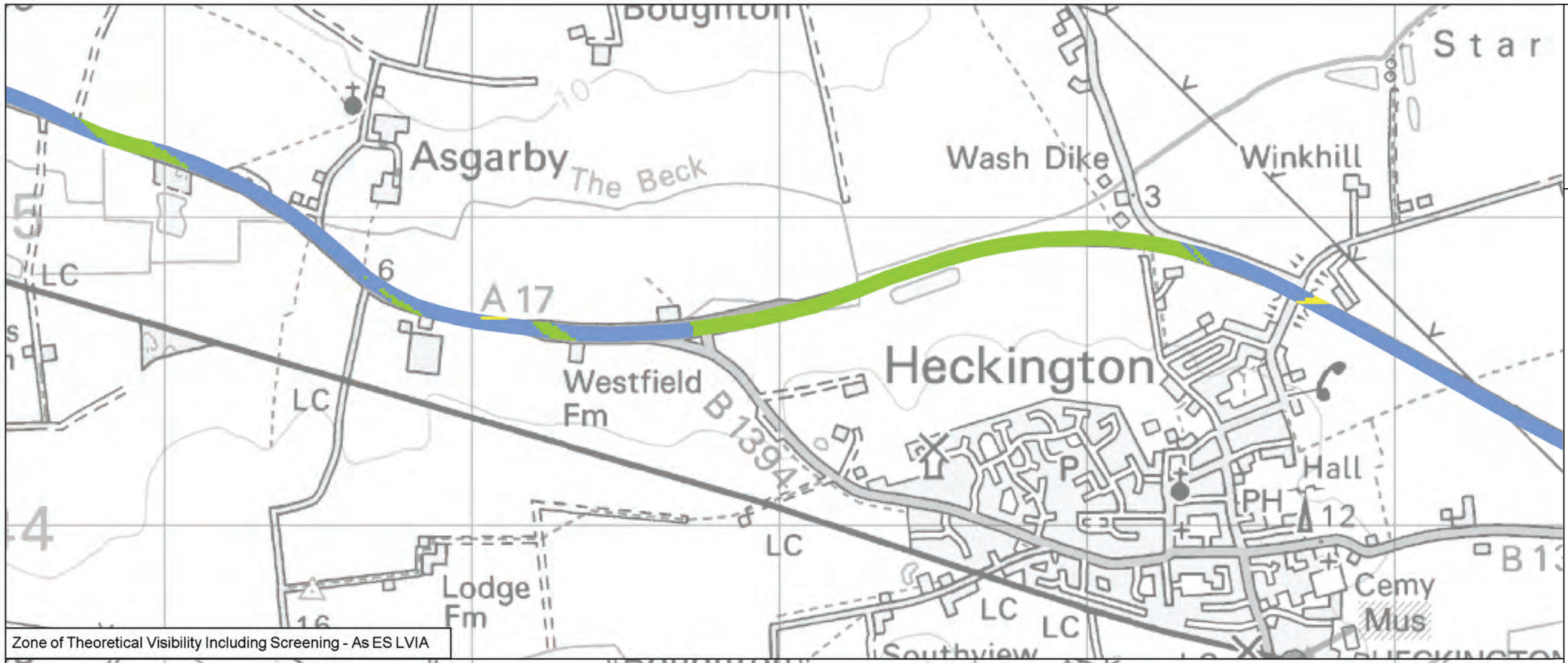
Date: December 2011

Scale: 1: 15,000 @ A3

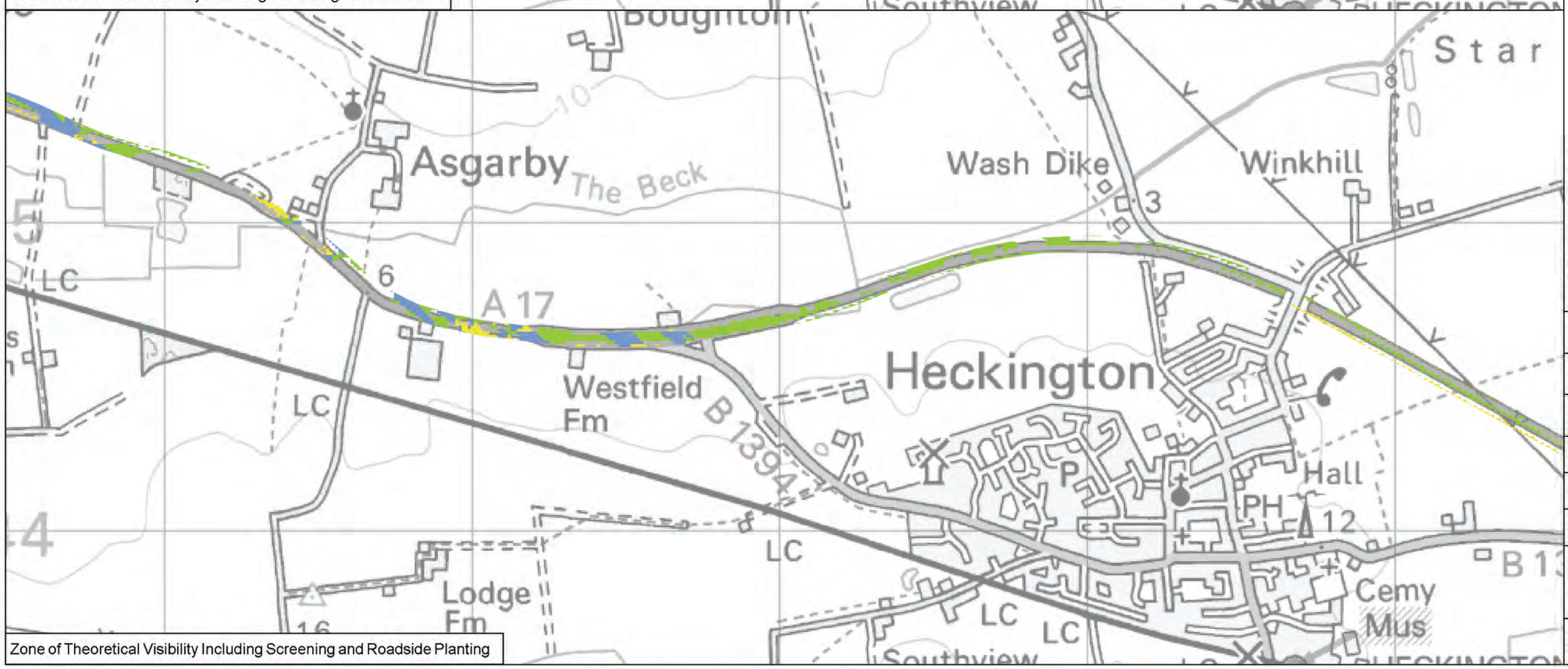
Figure: 4iii

Title: A17 Visibility Analysis - Section 3

Heckington Fen Wind Park
Further Environmental Information



Zone of Theoretical Visibility Including Screening - As ES LVIA



Zone of Theoretical Visibility Including Screening and Roadside Planting

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Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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W E
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Figure: 4iv

Title: A17 Visibility Analysis - Section 4

Heckington Fen Wind Park
Further Environmental Information

Zone of Theoretical Visibility Including Screening - As ES LVIA

Zone of Theoretical Visibility Including Screening and Roadside Planting

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Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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Checked by	
Approved by	

N W E S

Document Number: 4038_T0386_01

Date: December 2011

Scale: 1: 15,000 @ A3

Figure: 4v

Title: A17 Visibility Analysis - Section 5

Heckington Fen Wind Park
Further Environmental Information

ecotricity

Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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N
W E
S

Document Number: 4038_T0387_01

Date: December 2011

Scale: 1: 15,000 @ A3

Figure: 4vi

Title: A17 Visibility Analysis - Section 6

Heckington Fen Wind Park
Further Environmental Information

ecotricity

Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Zone of Theoretical Visibility Including Screening - As ES LVIA

Zone of Theoretical Visibility Including Screening and Roadside Planting

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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N W E S

Document Number: 4038_T0388_01

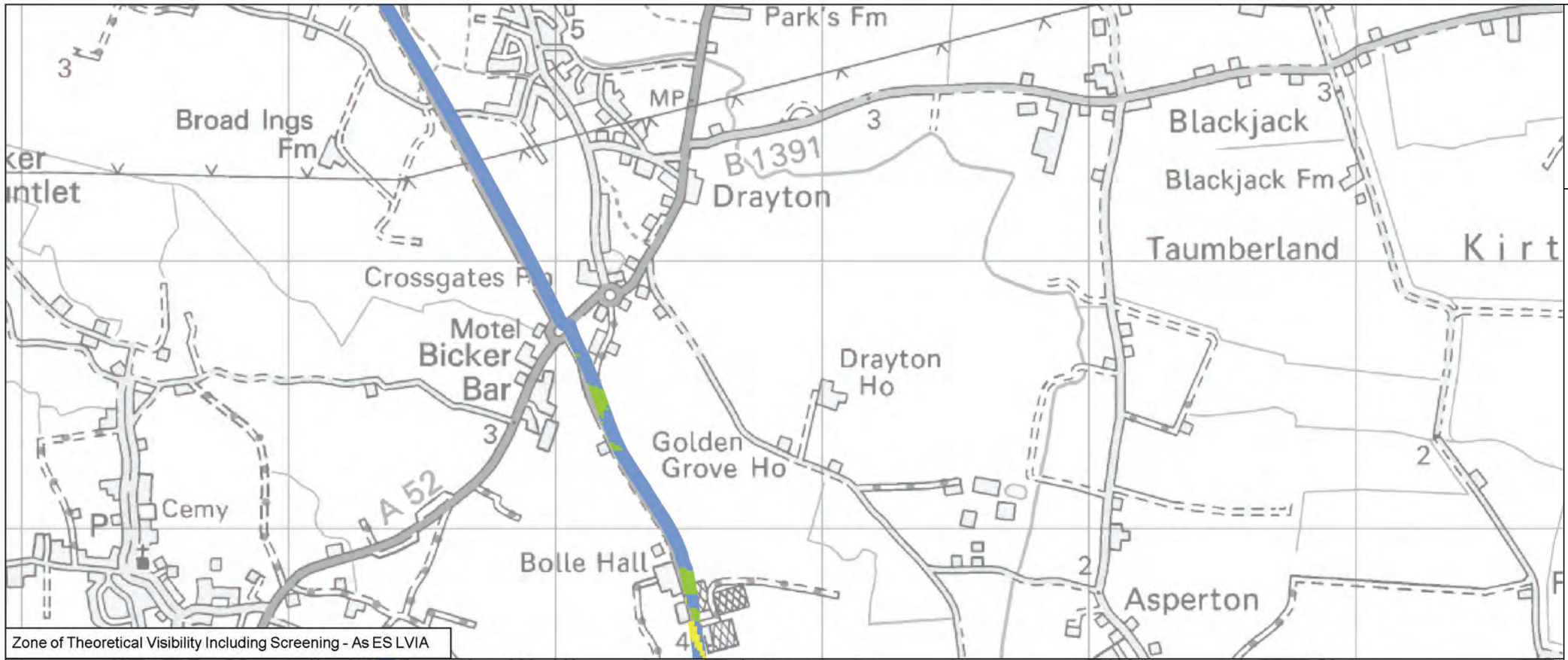
Date: December 2011

Scale: 1: 15,000 @ A3

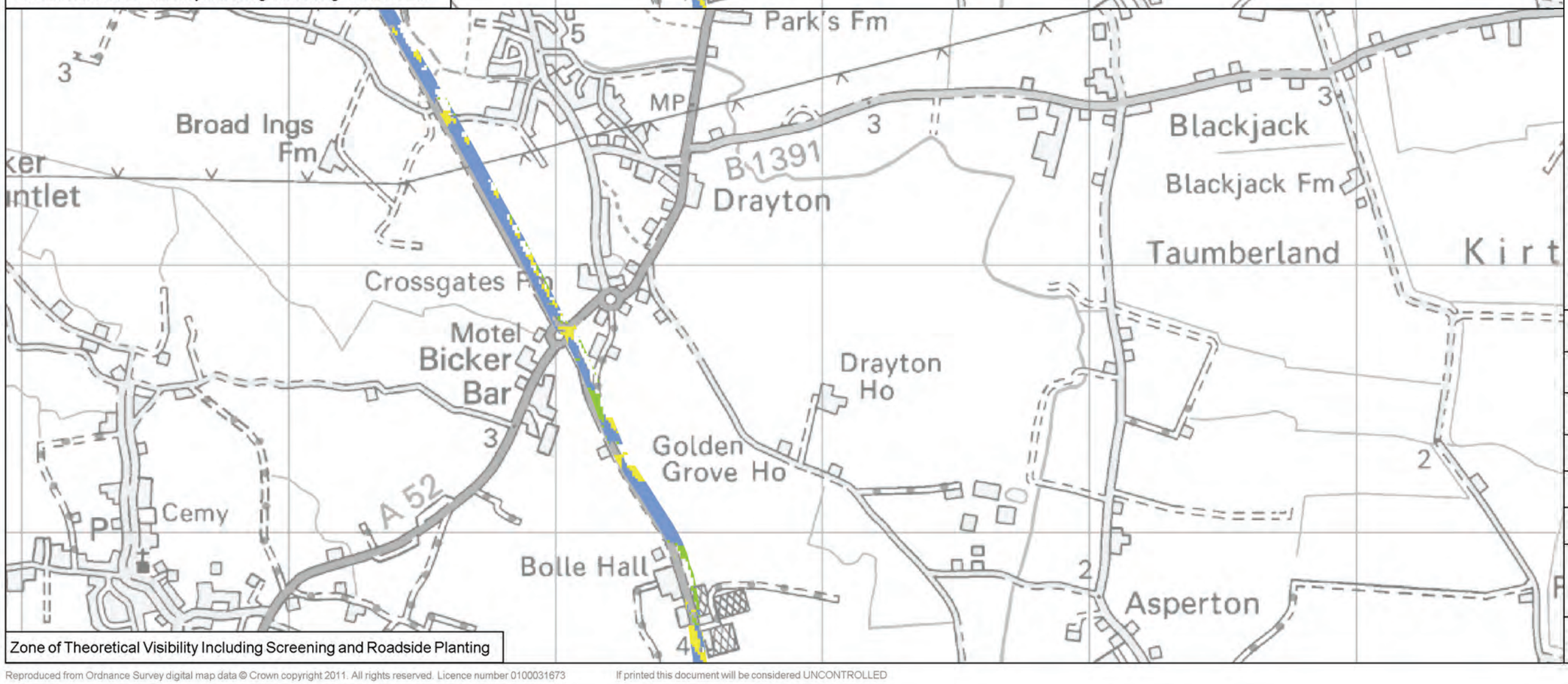
Figure: 4vii

Title: A17 Visibility Analysis - Section 7

Heckington Fen Wind Park
Further Environmental Information



Zone of Theoretical Visibility Including Screening - As ES LVIA



Zone of Theoretical Visibility Including Screening and Roadside Planting

ecotricity

Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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Checked by	
Approved by	

N W E S

Document Number: 4038_T0389_01

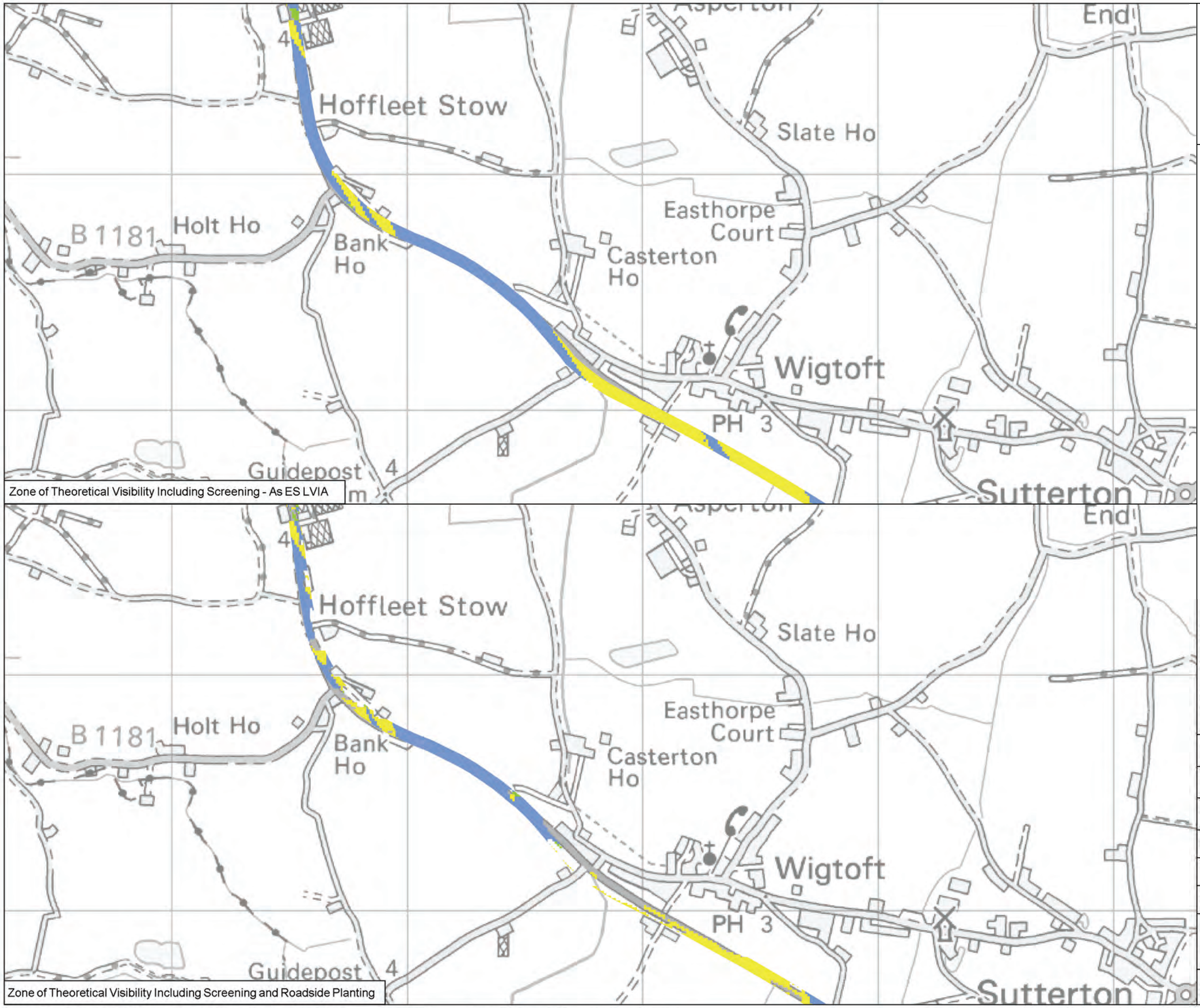
Date: December 2011

Scale: 1: 15,000 @ A3

Figure: 4viii

Title: A17 Visibility Analysis - Section 8

Heckington Fen Wind Park
Further Environmental Information



ecotricity

Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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W E
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Document Number: 4038_T0390_01

Date: December 2011

Scale: 1: 15,000 @ A3

Figure: 4ix

Title: A17 Visibility Analysis - Section 9

Heckington Fen Wind Park
Further Environmental Information

Zone of Theoretical Visibility Including Screening - As ES LVIA

Zone of Theoretical Visibility Including Screening and Roadside Planting

ecotricity

Axiom House
Station Road
Stroud
GL5 3AP
Tel: 01453 756111

Legend

ZTV to blade tip

- Heckington Fen Visible
- Bicker Fen Visible
- Both Visible

Note:
The ZTV shows those areas of open space, water bodies and transport corridors from where the proposed developments (or any part thereof) are likely to be visible at ground level. It does not take into account views from upper storeys of residential and other properties in the study area.

Both ZTVs take into account screening effects of some intervening elements such as woodland and buildings. Each of these are given assumed heights of 15m and 8m respectively.

The ZTV that includes roadside planting takes into account screening effects of roadside planting with an assumed height of 3m. It does not take into account incidental vegitation.

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Approved by	

N W E S

Document Number: 4038_T0391_01

Date: December 2011

Scale: 1: 15,000 @ A3

Figure: 4x

Title: A17 Visibility Analysis - Section 10

Heckington Fen Wind Park
Further Environmental Information