Landscape and Visual Impact Assessment

Erection of Single Wind Turbine

At Rainsbutt Farm, Crowle, North Lincolnshire, DN17 4BJ

For

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May 2014

CONTENTS

PLANS

APPENDICES

1. INTRODUCTION

1.1 This report addresses issues relating to the anticipated potential impacts upon the landscape character and visual amenity of the study area likely to result from the erection of a single wind turbine at Rainsbutt Farm in Crowle, North Lincolnshire. It describes and evaluates the change to the landscape and visual amenity once in operation, and the extent to which these affect perception and views of the landscape.

1.2 Landscape character and visual impact have been considered separately along with the cumulative effects of the proposal to provide a robust and clear assessment. The main objectives of the assessments are as follows:

- Establishment of the baseline
- Identification of potential impacts
- Prediction of residual effects

2. SCOPE OF THE ASSESSMENT

2.1 The appraisal is based on the proposals set out within the Design and Access Statement which accompanies this planning application and which details the proposal for a single 500kW wind turbine. The turbine is a three bladed horizontal axis wind turbine, with a hub height of up to 50metres and a blade diameter of up to 54 metres.

2.2 The proposal also includes a small enclosure measuring approximately 3.4m x 9.44m x 4.49m, which will house a substation and a further small enclosure measuring approximately 2.4m x 4m x 2.6m which will house a transformer, associated switchgear and electrical protection equipment. This enclosure will be located close to the base of the turbine tower and will be connected to the grid connection via underground cabling.

2.3 The site will be accessed via an existing access lane opening onto the local public road. The existing access track will be extended approximately 90m to allow for the turbine delivery, construction and maintenance.

2.4 The application site is situated on land off Oldgate Lane approximately 3 km from Crowle which is the nearest built-up settlement to the site. The application site is situated on arable land. A collection of nearby residential dwellings and farm buildings lie within a kilometre radius. The field on which the turbine will be located is surrounded by a network of dykes. The site lies in an open large scale landscape which already consists of quite a large number of wind farms, and therefore it is considered that the proposed, much smaller turbine would not have a negative effect on the landscape and visual amenity.

3. LANDSCAPE CHARACTER

3.1 This section of the document describes the key components, features and characteristics that contribute to the quality and perception of the landscape within the study area. It provides an evaluation of the implications of the proposed development in terms of direct effects on key landscape components and features. It considers the extent to which the introduction of the proposal would influence perception of local character within the study area and its implications for the wider regional landscape character.

Landscape Character Methodology

3.2 The landscape character assessment has been prepared with reference to the Guidelines for Landscape and Visual Impact Assessment (GLVIA) published by the Landscape Institute and the Institute of Environmental Assessment in 2013. This details a methodology that begins with an appreciation of the existing landscape, a thorough understanding of the development proposals, evaluation of the magnitude predicted to result from the development, the sensitivity of the existing landscape to change and the potential to mitigate impacts.

3.3 Reference has also been made to the following guidelines:

- Guidelines for Landscape and Visual Impact Assessment, Landscape Institute (2013)
- Cumulative Effect of Windfarms, SNH (April 2005)
- Assessing Cumulative effects of Onshore Wind Energy Developments, SNH (March 2012)
- Visual Representation of Windfarms Good practice Guidance, SNH (February 2007)

3.4 The assessment has involved five key stages:

- Preliminary site reconnaissance and defining the scope of the assessment
- Establishment of the baseline conditions relating to landscape character, quality and value, and sensitivity to change of the existing landscape

- Evaluation of the potential impacts anticipated to result from the introduction of the development into the baseline context
- Assessment of the effects of the anticipated impacts based on magnitude and sensitivity to change
- Description of the anticipated effects

Baseline Assessment

3.5 The following desk-based tasks have been undertaken:

- Review of Landscape Character Assessment for North Lincolnshire Council
- Local Policy Review

3.6 A site appraisal of landscape character and its key landscape, ecological and cultural elements was carried out (insofar as the latter elements contributed to the landscape character). Site recording involved the completion of standardised recording forms and annotation of 1:50,000 Ordnance Survey plans, supported by a photographic record of landscape character areas.

Effects Evaluation

3.7 The aim of the landscape impact assessment is to identify, predict and evaluate potential key effects arising from the proposed development. The assessment of predicted impacts involves:

- An appreciation of the nature, form and features of the proposed development in the context of the baseline landscape character. Landscape character is a composite of physical, biological and cultural elements. Landform, hydrology, vegetation, land use pattern and cultural and historic features and associations combine to create a common 'sense of place' and identity which can be used to categorise the landscape into definable units (character areas). The level of detail and size of unit can be varied to reflect the scale of definition required. It can be applied at national, regional and local levels.
- A review of the sensitivity to change of designated sites and landscape character in relation to changes proposed. This is arrived at by a review of landscape value and scenic quality.

- An evaluation of the predicted magnitude of change experienced by designated sites and landscape character, assuming implementation of the proposed development. This is in the form of quantification and description of the loss of, or indirect impact on, specific landscape components that make up the character of the various local landscape areas within the study area. Further, it includes explanation of the predicted change in the composite quality of the various areas related to such loss and influence in combination with the compatibility of the proposed forms within or neighbouring the various areas.
- Assessment of the degree and significance of the effect of the proposed development on the designated site or landscape character under consideration by relating the magnitude of change to the sensitivity to change.

Landscape Value/Sensitivity to Change

3.8 Sensitivity to change in the context of the proposed wind turbine and the potential impact on landscape character has been evaluated with reference to scenic quality and value, and has been rated as being high, medium or low. This three point scale uses the following criteria:

- **High Sensitivity:** a highly valued landscape of high scenic quality susceptible to change arising from wind turbine development, and/or a small scale, complex landforms and land cover characteristics with distinctive landscape features.
- **Medium Sensitivity:** a medium valued landscape of medium scenic quality, reasonably tolerant of change arising from wind turbine development, and/or medium scale landforms and land cover in combination; occasional distinctive features.
- **Low Sensitivity:** a low valued landscape of low scenic quality, which is tolerant of change arising from wind turbine development, and/or large scale, simple landforms and land cover characteristics with no distinctive landscape features.

Magnitude of Change

3.9 Magnitude of change has been accessed on a four point scale of high, medium, low or negligible. These criteria are described as follows:

- **High:** very noticeable indirect change in landscape characteristics over an extensive area, or direct change to landscape components / character over a less extensive area.
- **Medium:** noticeable indirect change in landscape characteristics over less extensive area, or direct change to landscape components / character over a localised area.
- **Low:** perceptible indirect change in landscape characteristics over a localised area, or direct change to landscape components / character over a very localised area.
- **Negligible:** virtually imperceptible or no indirect change in landscape characteristics over a very localised area, or virtually imperceptible, or no, direct change to landscape components/character.

3.10 Intervisibility as a medium of indirect change to landscape character has been considered in determining the magnitude of change. The potential extent of this visibility is assessed from the preparation of a series of Zone of Theoretical Visibility diagrams (ZTV). Wireframe diagrams and photomontages from viewpoint receptors have also been used as a tool to aid assessment.

Level of Effect

3.11 Using professional judgement and assisted by tools such as ZTVs, photomontages and wireframes diagrams, the assessment of effects reviews the magnitude of change likely to be experienced by a designated site or landscape character area with its sensitivity to change of the type proposed. It also takes into account direct impacts upon existing landscape elements, features and characteristics and assesses whether these would be lost or their relationships modified, in the context of their importance in determining the existing sensitivity of the character area in question.

3.12 Anticipated effects are reported in terms of a descriptive scale ranging from substantial - moderate - slight adverse through negligible to an ascending scale of slight - moderate - substantial beneficial.

3.13 The criteria adopted for the assessment of landscape effects are as follows:

- **Substantial adverse (or beneficial) effect:** very noticeable deterioration/improvement in the existing landscape
- **Moderate adverse (or beneficial) effect:** noticeable deterioration/improvement in the existing landscape.
- **Slight adverse (or beneficial) effect:** perceptible deterioration/improvement in the existing landscape.
- **Negligible effect:** virtually imperceptible deterioration/improvement in the existing landscape.

3.14 These criteria are also a combination of receptor sensitivity and magnitude of effects, as combined in the matrix set out in Table 3.1

	Magnitude of Change			
Sensitivity of Receptor	**High**	**Medium**	**Low**	**Negligible**
High	Substantial	Moderate	Slight	Negligible
Medium	Moderate	Moderate/Slight	Slight	Negligible
Low	Moderate/Slight	Slight	Negligible	Negligible

Table 3.1 Landscape Significance Criteria Matrix

3.15 The predicted impacts have been considered in the light of primary mitigation measures associated with site planning, culminating in a statement of the predicted effects and their overall significance to the landscape resource of the study area.

Limitations of the Assessment

3.16 A series of blade-tip and hub height ZTVs have been prepared. These have been prepared to assess the ZTV of the proposed turbine alone and in conjunction with all other wind turbine schemes that have been approved within a 10km radius. These indicate those parts of the overall study area from where there may be views of the proposed development based on bare ground analysis, i.e. the OS 1:50,000 digital terrain model. It shows areas from

where any part of the turbine up to the overall height may potentially be visible. The ZTVs do not take into account small scale local variations in topography, or the possible screening effects of hedgerows, individual trees and woodland, walls or similar features that can alter the visual envelope locally, particularly when close to the viewpoint. Therefore, while the ZTVs indicate areas of potential visibility of the proposals, in reality not all locations within the ZTVs would necessarily afford a view of the proposed development.

3.17 All ZTV plans, wireframes and photomontage images were produced by Entrust Professional Services Ltd. using WindPRO software. They are produced as part of this report for ease of reference and comparative purposes. Please refer to Appendix 2 for original WindPRO generated ZTV and CZTV data and observation distances.

LANDSCAPE BASELINE CONDITIONS

3.18 Landscape and heritage designations that lie within a 3km radius of the site have been considered within this assessment. The landscape and heritage designations that may or may not be directly or indirectly affected by the site are discussed below.

Nature Conservation Designations

3.19 The application site does not fall within any nature conservation designations. The nearest protected area to the site is Humberhead Peatlands NNR circa. 1.8km to the west of the site. Other nearby designations also include: Thome Moor SAC, Thome, Crowle and Goole Moors SSSI both approximately 2.3km to the west of the site. There is also Thorne & Hatfield Moors SPA approximately 2.5km to the west of the application site. These are considered to have a ***High*** sensitivity.

Historic Landscapes

3.20 The application site does fall within the Isle of Axholme which is a historic landscape regarded for its unique history and nationally important open strip field system. There is also the historic landscape of Belton approximately 9.9km

south of the proposed turbine location. These are considered to be of ***High*** sensitivity.

Conservation Areas

3.21 The nearest Conservation Area lies at Crowle approximately 3km to the south The ZTV accompanying this application illustrates that the proposed turbine will be theoretically visible from these locations. The Conservation Area at Crowle is considered to have a ***Medium*** sensitivity given that it is a locally designated asset.

Scheduled Ancient Monuments and Listed Buildings

3.22 There are 27 listed buildings which fall within the 3km study area, although none fall within the application site. The closest listed building is the Grade II listed '*Moorend Farmhouse' and* stable west of it which are both approximately 2.2km northeast from the turbine site. The closest Grade II* listed building is '*Goole Hall'* which is located over 5km, 5.5km to be precise from the proposed turbine. The closest Grade I listed building is over 10km to the east (Normanby Hall) from the proposed turbine. All of these listed buildings will have a 'theoretical' visibility of the proposed wind turbine. There are no Scheduled Ancient Monuments (SAM) within the 2km study area. The nearest SAM lies approximately 8km southeast in Keadby, '*Keadby Lock'*. Collectively these are considered of ***High*** sensitivity given that they are nationally designated assets.

National Landscape Character

3.23 The application site is within NCA Profile: 39 'Humberhead Leves'. This NCA is bounded to the west by the low ridge of the Southern Magnesian Limestone and to the east by the Yorkshire Wolds (north of the Humber). To the north it merges into the slightly undulating landscape of the Vale of York, at the line of the Escrick Moraine, and in the south it merges in to the Trent and Belvoir Vales and Sherwood. This area is characterised by flat, low-lying, and open landscape.

3.24 Key characteristics of this NCA are:

- A low lying, predominantly flat landscape, with large, regular and geometric arable fields without hedges but divided by ditches and dykes, many of which form important habitats and key corridors for species movement.
- Much of the land is at or below mean high-water mark and maintained by drainage, with fertile soils giving rise to one of the most productive areas for root crops and cereals.
- Variations in underlying deposits create differences within the overall flat farmed landscape, including lowland raised mires and lowland heathland, many of which are of international ecological and historical importance.
- Sandy deposits give rise to remnant lowland heaths which in places support remnant birch and oak woodlands, with some conifer plantations.
- Heavier soils around Fishlake and Sykehouse result in a smaller scale pastoral landscape, with small, thickly hedged fields, ditches and ponds, and a network of small lanes.
- Important historic landscape include the Isle of Axholme, with evidence of medieval open fields, the warps (land enriched by regular silting) near Goole and cables (long think strips fields) around Thorne.
- Widespread evidence of drainage history, in particular the extensive drainage from the 17th century, revealed through canalised rivers, dykes, old river sources, canals, bridges and pumping stations.
- Views to distant horizons are often long and unbroken, with bug expansive skies, and vertical elements like water towers, power stations and wind turbine are very prominent.
- Despite settlements, motorways and main roads, there is still a sense of remoteness to be experienced on the Levels, in particular on Thorne and Hatfield Moors and along the lower Derwent Valley.

Given the fact that the proposal is for a single wind turbine located in such a large geographical landscape form; being the Humberhead Levels NCA, we believe that it is highly unlikely that the proposed development would have a detrimental effect on the character of this NCA

Regional Landscape Character

3.25 North Lincolnshire Landscape Character Assessment, provides the regional level of landscape character designation. The proposed site is located within ***Trent Levels***, which is characterised as:

- Essentially flat, open flood plain landscape with occasional rising ground and little vegetative cover.
- Large open field structure defined by well-maintained drainage ditches. Hedgerow planting helps to define boundary areas in places, however hedges are generally badly maintained and gapped.
- Landscape offers expansive views with very little diversity in character. Woodland blocks, rising ground and settlement create distant enclosure.
- Open arable areas are occasionally punctured by small woodland copses, farmsteads, shelterbelts, overhead electricity pylons and well-treed settlements.
- The area is dominated by linear features, long narrow roads flanked by drainage ditches, rectilinear field pattern, shelterbelts, field drainage systems, overhead electricity pylon runs and some major transport corridors i.e. the M180 and railway.
- Larger settlements are found on higher ground or adjacent to the banks of the River Trent. The open floodplains are generally unpopulated with only small farmsteads and associated barns/sheds.

This landscape is considered to have ***Low*** sensitivity.

Local Landscape Character

3.26 The Trent Levels landscape character area has been subdivided into local landscape types. The application site falls within the ***Flat Open Remote Farmland.*** Key characteristics of this landscape type are:

- An open area of mostly large arable fields, offering expansive views across a low-lying, level landscape with tree and hedge cover almost completely absent over much of the landscape.
- The woodland of Crowle Waste or Moors turbary landscape to the west and the settlement of Crowle in the south east offer some enclosure to views in these directions.

- The landscape has a distinct feeling of remoteness. Only in the peripheral areas of Crowle does the landscape begin to become more enclosed and intimate.
- Areas of the medieval strip farming system, forming part of the Moorland Allotments (known as the Crowle Ribbons) can be seen in areas surrounding Crowle and Crowle Common. The farming system in which areas of former peat extraction were converted to strip farming is associated with the edge of raised mires (in the case Crowle Waste or Moors) and result in a characteristic landscape.
- Elsewhere the landscape has been subject to early and recent enclosure, but has suffered of hedgerow removal, mainly due to the intensification of agricultural practice with the result that fields lack boundary definition.
- In the south of the local landscape type tree cover is limited to small fragmented copses with associated unmanaged hedgerows and intermittent tree cover.
- Characteristic well-maintained drainage ditches follow the line of roads and form intricate networks throughout the fields, but do not have a strong visual presence
- There are very few roads crossing this area, adding to the remote character, only a few tracks cross the open fields offering limited access.
- A water treatment works and large prefabricated agro-industrial barns are found in the areas surrounding Crowle. Some tree planting (often pine) has been used to screen these structures, however they still combine with the backdrop of the predominantly modern settlement to create visually intrusive features.
- Telegraph poles and farmsteads with associated tree planting, add height to the low-lying landscape in which horizontal elements tend to dominate.

LANDSCAPE FEATURES AND CHARACTERISTICS

Wider Landscape Character

3.27 The wider landscape is the most westerly landscape in North Lincolnshire. It is predominantly low-lying flat landscape defined by well-maintained drainage ditches, and low-lying floodplains areas of the River Trent running through the area from north to south. There are occasional elevated grounds, with the most distinct being the gently rising Isle of Axholme in the west of the area.

3.28 The wider landscape is predominantly rural with arable farmland set within a medium to large scale field structure punctuated by scattered farmsteads, wind farms, and pylon lines traversing the landscape. Rural settlements are few, tending to crowd the elevated land in the west and the banks of the River Trent. Windfarms, water towers and churches more industrial elements are a feature of the wider landscape adding variety to the landscape. These elements combine to create a relatively disturbed landscape visible from main vehicular movement routes, with the more rural areas of the wider landscape permeable and accessible, with small rural tracks featuring prominently.

3.29 It is considered that the wider landscape is of ***Low*** sensitivity.

Immediate Site and Setting

3.30 The application site lies within an arable field approximately 3km north of the village of Crowle. The proposed turbine would be located approximately 90m from a dyke/ditch on a medium scale field surrounded by medium to large fields pierced through by a network of wet ditches. There is no form of vegetation in the immediate surroundings. The landscape is open and expansive providing long views into the distance.

3.31 The site can be accessed from the rural track from the north and south. From the south the track travels through Rainsbutt Farm which is connected by a local unnamed road to Crowle. From the north, where the turbine parts will arrive from, the site can be accessed by a local road past Moor End farm, through Swinefleet and Goole which connects the site to M62 motorway.

3.32 There are no waterbodies on the application site itself, although the field on which the turbine would be located has ditch to the south, approximately 105m from the turbine. There is another dyke to the east of the turbine location which would be approximately 90-95m.

3.33 No Public Rights of Way (PROW) exist within the application site, and there are no public footpaths in the immediate vicinity. There is a cycle route approximately 230m to the northwest of the turbine site starting at a gate on Oldlane Gate. The cycle route travels to the north towards the Moor End farm.

3.34 There are very few residential properties in the immediate vicinity. The proposed turbine would be approximately 650m northwest of Easingwold House. The site survey has concluded that the principle elevation will not be facing the site. The nearest other residential dwelling is a dwelling south of Moors Farm located approximately 660m northwest of the turbine. The dwelling is facing the site but it has mature tree planted screening the turbine location. Rainsbutt House is approximately 750m from the proposed turbine location.

3.35 It is considered that the immediate site and setting is of ***Medium-High*** sensitivity.

ASSESSMENT OF IMPACTS ON LANDSCAPE DESIGNATIONS, CHARACTER AND FEATURES

3.36 The following section provides an assessment of the effects that the development would have on landscape character areas and designated sites within the 3km study area. The assessment assumes that the likely impact during construction will be similar to that of the operational phase.

3.37 The effects on designated sites and landscape character areas are set out below.

3.38 The proposal will have no 'direct' effect on the characteristics or features of any designated landscape or heritage assets. The only potential effects would be 'indirect', affecting the visual setting of such designations.

Impact on Nature Conservation Designations

3.39 The application site does not fall within any nature conservation designations, with the nearest protected areas to the site being Humberhead Peatlands NNR circa. 1.8km to the west of the site. This area is considered to have a ***High*** sensitivity. It is considered that there is little potential for changes to views from this identified designation due to the separation distance and intervening vegetation, and as such the proposal represents a ***Low*** magnitude of change resulting in a ***Slight*** effect.

Impact on Historic Landscapes

3.40 The application site falls within the boundaries of Isle of Axholme which is regarded for its history. This area is considered to be of ***High*** sensitivity. The proposed turbine is not considered to significantly affect the landscape characteristics of the Isle of Axholme which features many vertical elements in this open, and low-lying landscape. It is not considered to have an adverse impact on this designation, and as such the proposal represents a ***Low*** magnitude of change resulting in ***Slight*** effect. Approximately 9.9km from the site there is a historic landscape at Belton. This area is also considered to be of ***High*** sensitivity recognised by Natural England and English Heritage for remnant medieval farming systems. Due to the separation distance and intervening landscape and landscape cover it is deemed that the proposal will have a ***Negligible*** effect which results in corresponding effect.

Impact on Conservation Areas

3.41 The nearest Conservation Area is located in Crowle, approximately 3km south of the proposed wind turbine location. The intervening buildings and natural screening results in no physical or visual connectivity between the Conservation Area and the proposal. The Conservation Area and its setting has a number of vertical and visual detractors between them, such as existing windfarms, which minimise the visual impact the turbine has on the views from the Conservation Area. The Conservation Area at Crowle is considered to have a ***Medium***

sensitivity given that it is a locally designated asset, however the proposal represents a ***Negligible*** magnitude of change and corresponding effect.

Impact on Scheduled Ancient Monuments and Listed Built Form

3.42 There are 11 listed buildings together which are considered to have a **High** sensitivity given that they are nationally important. The closest Scheduled Ancient Monument is located approximately 8km from the site in Keadby, and it is also of ***High*** sensitivity due to its importance. A limited number of listed buildings may have views of the turbine. The closest listed building is the Grade II listed '*Moorend Farmhouse' and* stable west of it which are both approximately 2.2km northeast from the turbine site at Castle View Farm. There is expected to be a low impact on this building due to a significant separation distance and intervening mature land cover features such as mature trees, vegetation, and built environment screening most of the views of the proposal. Even though, the dwelling is oriented in a north-south direction, and the principle elevation is facing south, in the direction of the site, there are mature trees blocking the views, and therefore minimising the impact of the turbine. The proposal is considered to represent a ***Negligible*** magnitude of change resulting in corresponding effect to the setting of the Listed Building. There are no Scheduled Ancient Monuments (SAM) in the vicinity to the application site. The nearest SAM is the '*Keadby Lock´* approximately 8km to the southeast of the application site. It is considered that, due to the separation distance, intervening built environment within which the SAM is located there will be no impact on this heritage asset. The proposal is considered to represent a ***Negligible*** magnitude of change and the overall effect is considered to be **Moderate**.

Impact on Flat Open Remote Farmland LCT.

3.43 The turbine would be located within flat, low-lying large scale landscape on an arable field bounded by a network of dykes and ditches. It is considered that the overall sensitivity of this landscape is ***Medium-High*** due to the adjacent National Nature Reserve exhibiting a tranquil and remote character, which forms part of that landscape character type. Views from within this LCT will be predominantly long and expansive stretching far into the distance, however

these will also be intermittent and often enclosed due to the vegetation and scattered quite large farmsteads. It is acknowledged that the proposed turbine will be an additional vertical feature in this large scale landscape, which already consists of much taller turbines, which already detract from the tranquillity of the landscape. Therefore, it is not considered that the proposal will have adverse impact on an already compromised landscape setting which includes many windfarms in all directions, large farmsteads with associated vegetation. The proposal is considered to have a ***Low*** magnitude of change on the immediate surroundings which is deemed to be able to assimilate the turbine into its characteristics without having any significant negative impact on the landscape nature. The proposal will therefore result in **Slight/Moderate** effect.

Impact on Wider Landscape Character

3.44 The overall landscape sensitivity of the wider landscape character is considered to be **Low.** The proposal will result in a minor degree of change and will not result in permanent loss or a significant amount of these features. While a small area of arable crop will be lost, the overall effect on character will be minimal. The addition of a single wind turbine will not prevent the current arable land use, only a very small portion of it. The proposal is set nearby large scale commercial wind farms so therefore it will not stand out as a prominent or dominant feature in the landscape. The cumulative effect of an additional wind turbine in this landscape location is not considered to impact adversely on the existing landscape character, and it is not deemed to cross the threshold of significance to make the proposal unacceptable. It is considered that the impact represents a ***Low*** magnitude of change, resulting in a **Negligible** adverse effect on the wider landscape character.

Impact on Immediate Site and Setting

3.45 With regards to effects on landscape features within the application site, there would be no change to existing field boundaries, landform or watercourses. A degree of arable land would be lost to provide the turbine base and plant enclosure; however the lack of existing public access and permeability across the site will ensure that the perceived impact from within the immediate site and setting is reduced. The sensitivity of the immediate site and setting is

considered ***Medium-High***. It is considered that the proposal represents a ***Medium*** magnitude of change giving a ***Moderate*** adverse effect.

Summary of Effects

3.46 It is considered that the impact of the proposal on landscape designations, heritage assets and landscape features will be ***Moderate*** adverse overall. The proposal will have no direct effect on the characteristics or features of any designated landscape or heritage assets. The only potential effects would be 'indirect', affecting the visual setting of such designations. Landscape features of the localised setting and wider landscape character will remain unaffected, although there will be a degree of impact on the immediate site as a proportion of arable land will be lost to the proposal resulting in a slight-adverse effect. The proposed turbine will be seen in the context of the medium-large scale fields within which it will sit and the wider landscape character area that already includes a large proportion of existing commercial windfarms, as well as more rural and tranquil areas; as such the wider landscape character will remain unaltered. The introduction of the proposed turbine is considered to be able to be accommodated without a detrimental effect to the localised and wider landscape character.

4. VISUAL AMENITY

4.1 This section addresses issues relating to potential effects upon the visual amenity of the study area likely to result from the proposals. It describes and evaluates the potential change in views of the existing landscape once in operation, and the extent to which these affect residents, visitors and user of the landscape.

Visual Methodology

4.2 As with the landscape character the assessment of visual impact has been based on the Guidelines for Landscape and Visual Impact Assessment (GLVIA, 2013). The guidelines suggest that visual impacts are assessed from a clear understanding of the development proposed and any related landscape mitigation measures. It calls for an understanding of the visual form of the

existing landscape, its quality and sensitivity to change taking into account the nature of the development. It further calls for an evaluation of the sensitivity of potential visual receptors (viewers) and of the magnitude of change likely to result from the implementation and use of the development.

4.3 The assessment has involved three key stages:

- Determination of the main areas where impacts would occur as a result of the location and orientation of the receptor, and establishment of the baseline conditions relating to the visual context of the study area and the location of potential visual receptors.
- Evaluation of the potential impacts anticipated to result from the introduction of the development into the baseline context.
- Assessment of the effects of the anticipated impacts based on an evaluation of magnitude and sensitivity to change.

4.4 Appreciation of the baseline conditions, evaluation of the predicted impacts and assessment of effects related to predicted impacts have been undertaken in accordance with guidelines in GLVIA.

4.5 The following specific desk-based tasks have been undertaken:

- Consultation with the main local authority within the detailed study area, regarding methodology, key views and viewpoint locations.
- Identification of the Zone of Theoretical Visibility (ZTV) for the proposed development.
- Identification of potential receptors within the visual envelope

Identification of Potential Receptors and Viewpoints

4.6 For there to be a visual impact there is the need of a viewer (receptor). Receptors include users of residential properties, work places, recreational facilities and other outdoor sites used by the public, roads, railways and footpaths, which would be likely to experience a change in existing views as a result of the construction and operation of the proposed development.

4.7 The Zone of Theoretical Visibility provides a means of identifying potential receptors (viewers) in order that impact assessments can be undertaken. It is prepared using specialist software that utilises a radial sightline methodology to calculate visibility. It assumes a viewing height of 2m and includes correction for the curvature of the earth and atmospheric effects. The ZTV assumes a single target on the tip of the turbine at its highest point. The resulting ZTV is an estimation of how many of these points would be visible from each point in the study area. As only topographic obstructions are included, the visualisations present a worst-case model, as objects such as vegetation and buildings are not considered. It is therefore not representative of visual effect in itself nor does the presence of a receptor within the boundary indicate that the development would necessarily appear in views currently experienced by that receptor.

4.8 The ZTV for the proposed development, including those of existing and other application sites, were reviewed to aid identification of potential receptors likely to be subject to impact specific to the proposed site and to assess cumulative effects related to the site in combination with others.

4.9 Photographs towards the proposed turbine site have been taken and can be found in Appendix 1. In line with current best practice, these are intended to be viewed from a distance of 300min order to replicate as closely as possible, the view as seen from the viewpoint location.

4.10 For each of the viewpoints, wireframe diagrams and illustrative photomontages have been prepared to indicate the likely size and location of the proposed turbine. The photomontages have been prepared for the views considered to be most sensitive.

4.11 The evaluation involved the following tasks:

- Analysis of the sensitivity of the viewpoint receptors to the anticipated change in their view.
- Identification of the anticipated magnitude of change in existing views at these locations.

Receptor Sensitivity

4.12 Sensitivity of a receptor to the proposed development considers the nature of the receptor as well as the importance to that receptor of the view being changed. In this assessment sensitivity is ranked on the scale set out below, which has been adapted from GLVIA methodology.

- **High sensitivity:** Residents of dwellings; users of recreational footpaths, tracks and vantage points.
- **Medium sensitivity:** Users of rural lanes that are used for recreational uses as well as purely vehicle access.
- **Low sensitivity:** Vehicle users. Agricultural workers. Occupants of places of employment, education etc.

Magnitude of Change

4.13 Magnitude of change considers the extent of development visible, the extent of existing view that would be occupied by the development, the influence of the development within the view and the viewing distance from the receptor to the development.

4.14 In the assessment of visual impact the magnitude of change is considered in terms of the type of change taking place in a view from a receptor and the degree of change which would take place in that view.

4.15 Magnitude of change is measured on the following scale, which has been adapted from GLVIA methodology:

- **High magnitude:** where the development would cause a very noticeable change in the existing view.
- **Medium magnitude:** where the development would cause a noticeable change in the existing view.
- **Low magnitude:** where the development would cause a perceptible change in existing view.
- **Negligible:** where the development would cause a largely imperceptible change in the existing view.

Assessment of Effects

4.16 The main criteria used to evaluate visual impact are centred on the extent to which the proposed development would modify established views. The assessment of effects is based on consideration of both sensitivity to change and magnitude of change.

4.17 The final assessment adopts the following categories to illustrate the level of visual effect:

- **Substantial adverse (or beneficial) effect:** very noticeable deterioration / improvement to the existing view
- **Moderate adverse (or beneficial) effect:** noticeable deterioration / improvement to the existing view
- **Slight adverse (or beneficial) effect:** perceptible deterioration / improvement to the existing view
- **Negligible effect:** largely imperceptible deterioration or improvement in the existing view.

4.18 These criteria are also a combination of the receptor sensitivity and magnitude of effects defined above, as combined in the matrix set out in Table 4.1 below.

	Magnitude of Change			
Sensitivity of Receptor	**High**	**Medium**	**Low**	**Negligible**
High	Substantial	Moderate	Slight	Negligible
Medium	Moderate	Moderate/Slight	Slight	Negligible
Low	Moderate/Slight	Slight	Negligible	Negligible

Table 4.1 Visual Significance Criteria Matrix

Limitations of Assessment

4.19 The assessment of visual effects has been undertaken from the nearest public road, footpath or open space as appropriate. Views from the curtilages of private properties have not been obtained.

Visual Baseline

4.20 The site survey and generation of a ZTV indicated the potential receptors that may have views of the turbine. Refer to Plan 02. Following the appraisal a series of six representative viewpoints were selected, for wireframe/photomontage visualisations. Each representative viewpoint is discussed below and can be found within Appendix 1 in the plans section of this report.

4.21 Due to the topography the proposed turbine will be seen from across the landscape. It will be an evident new vertical feature in the skyline, however due to the flatness and openness of the surroundings and existing land cover including mature tree planting, many scattered farmsteads, it is considered that there will be a lot of intermittent views of the turbine with some clear and long distance views of the turbine. Also, due to the fact that the area contains quite a large number of big windfarms, with much bigger turbine sizes, it is considered that the proposal will not be visually intrusive to any nearby and more distant visual receptors.

4.22 Within 1km of the site there are only three farmsteads, of which one of them is the applicant's. In this distance the turbine would be readily visible, but as the site survey confirmed, none of the dwellings will have a direct view of the turbine with intervening vegetation adjacent to all properties screening the views of the site. It is regarded, that the turbine will not become a feature in the landscape which will make the residents or the viewers within the setting of the properties feel uncomfortable. There are no public right of ways within 1km of the site, except a short stretch of cycle route which ends approximately 250m to the north of the turbine. No adverse impacts on this route are predicted. Therefore, the visual impacts are not considered to be significant. The proposed turbine will be seen within the context of existing large wind farm developments, which detract in the views towards the site. Existing natural screening and the built environment also aid in enclosing views.

4.23 With distance, the visual impact of the turbine will lessen and the turbine will seem to be 'absorbed' by the landscape. Within 2km of the site there are only

four more farmsteads: Red House Farm, Yorkefleet, Cottage Farm, and Eastoft Carr. It is considered that in this distance the turbine will be slightly visible rising above the vegetation/built environment but it will not be a significant visual addition to the skyline. Depending on the direction of the views, it is regarded that the turbine will be barely noticeable feature which will not make any visual receptor feel uncomfortable. The proposed turbine will be seen within the context of existing large wind farm developments, which detract in the views towards the site. Existing natural screening and the built environment also aid in enclosing views.

4.24 Wider views (more than 3km) of the turbine are reduced through the presence of a degree of intervening vegetation, roadside vegetation and farmsteads scattered across the low-lying land on which the application site lies. Views from areas near Belton will be possible but in such distance the proposed turbine would be barely noticeable in the context of large-scale wind turbines dominating the landscape. Although, the Zone of Theoretical Visibility concludes high visibility of the turbine within the 5km radius, it is considered that within 3-5km and more, the turbine would barely be a noticeable feature in the landscape. A majority of the views would most likely be intermittent for the users of the A161 in both directions, small country lanes around Crowle and Eastoft. Slightly further away, for the users of the A18 and M180, the turbine will be hardly distinguishable.

4.25 The ZTV analysis provided an indication of theoretical visibility of the turbine in the immediate and wider landscape. The overall theoretical visibility within the 5km radius from the turbine site is 80.4%. The area where the turbine would not be theoretically visible is to the east of Crowle, near Crowle Hill. It should be noted that the ZTV analysis only takes into account the bare ground conditions without any land cover features, such as vegetation and built form. Therefore, the realistic visibility is much less than what the ZTV provides.

4.26 The ZTV analysis and site surveys established that the views from the northwest, north, northeast, east and southeast of the turbine are generally open offering wider views from these directions. The topography is flat providing long

distance views, however existing vegetation and built environment including large farmsteads with adjoining vegetation, from some angles will create more broken and intermittent views of the application site. Wider views from the west, southwest, and south are theoretically available as well, however due to the existence of large woodland areas of the protected moors to the west and the built up area of the Crowle village to the south of the turbine, would to some extent screen the views of the application site from these directions. It is considered, that if visible, the turbine will be seen in conjunction with the wind farm turbines which are much larger in size and form quite a dominating series of vertical elements in the landscape. These wind farms are prominent in the views towards the proposed turbine site from all directions and they form a strong unified pattern throughout the wider landscape, and to some extent they would aid to 'absorb' the proposed turbine. It is considered that from distant viewpoints, the proposed turbine would have an insignificant visual impact.

4.27 Visual impact assessment from the chosen viewpoints has be carried out and comments are listed below.

4.28 Each individual viewpoint is discussed in table 4.2 below

Viewpoint (VP)	Sensitivity, Magnitude of Change and Overall Effect
VP1	Viewpoint 1 is taken from an intersection of the cycle route travelling to the north and small rural track. The photo faces a south-east direction towards the application site which is surrounded by arable fields. Rainsbutt Farm is visible in the background, and to the left there is Easingwold House farmstead with adjoining vegetation. There are pylon lines in the background traversing the landscape. The wireframe and photomontage illustrate the proposed turbine in context. In the wireframe and photomontage, the turbine is clearly visible breaking the skyline. Both the photomontage and wireframe show that the turbine sits on a

	flat and low-lying landscape and the turbine forms an additional vertical element in the viewpoint and brings a moving element within this context. The viewpoint is considered to have **Medium-High** sensitivity and the proposal represents a **Medium** magnitude of change resulting in a **Moderate /Slight** effect.
VP6	Viewpoint 6 is taken from a local unnamed road halfway between Cottage Farm and Easingwold House. The photo depicts a telephone line and hedgerow along the road, arable fields with ditches, and Rainsbutt Farm buildings with adjoining vegetation. To the right of the picture, part of Easingwold house farm is visible. The wireframe and photomontage illustrate the proposed turbine in context. In the photomontage, the turbine is rising above the tree line to the right of Rainsbutt Farm. The existing telephone line minimises the impact of the turbine which is only slightly taller than that vertical feature. In the wireframe, its location on a flat landscape makes the proposal clearly and fully visible. It forms an additional vertical element in the viewpoint and brings an additional moving element within this context. The viewpoint is considered to have **Medium** sensitivity. No localised landscape features or wider landscape characteristics are lost and there are a number of detractors already within this view. The proposal represents a **Medium** magnitude of change resulting in a **Moderate adverse** effect.
VP8	Viewpoint 8 is taken from the local road leading from Crowle towards the application site to the north. The photograph

	depicts an open low-lying landscape to the left, road, and roadside vegetation with tall mature tree planting to the right. There are vertical elements visible from this viewpoint which includes road signs and telephone lines traversing the landscape east to west, and other wind turbines in the background. The wireframe and photomontage illustrate the proposed turbine in context. In the photomontage the base of the turbine is screened behind the farm buildings. The hub of the turbine is slightly above the level of the telephone line, and the top of the blade is visually at the same level as the road sign to the right. It forms an additional vertical element in the viewpoint and brings an additional moving element within this context, and although visible it sits comfortably within the landscape without drawing an eye to such an extent as to make the observer feel uncomfortable. The wireframe depicts the turbine within the flat and low-lying landscape, but in reality the bottom part of the turbine will be screened by the vegetation. It is considered that the viewpoint has **Medium-High** sensitivity, as it represents views of the local road users and potentially some residents, but whose houses do not face the turbine. It is unlikely that the proposal will stand out as a prominent feature in the landscape due to the partially obscured view available and as such it is considered that the proposal represents a **Low** magnitude of change resulting in a **Slight/Moderate** effect.
VP12	Viewpoint 12 is taken from A161 road at the southern fringe of the village Eastoft. The photo has been taken at the side of the road and is facing west towards the application site. The photo depicts flat agricultural land with a ditch at the right hand side, and scattered mature vegetation. There are vertical elements visible from this location, such as telephone lines traversing the

	landscape and commercial wind turbines from windfarms in the distance. The wireframe and photomontage illustrate the proposed turbine in context. Similarly to previous viewpoint, the wireframe illustrates that the turbine is set within a flat landscape. The photomontage depicts the turbine in the far distance, set within other wind turbines further away and vertical elements, such as the telephone poles. Although, fully visible it sits comfortably and is of very similar scale to already existing wind turbines. It creates a uniform visual pattern together with other vertical elements and does not have any dominating or overbearing effect on the visual receptors in this viewpoint It is considered that the viewpoint has a **Low** sensitivity as it only represents local vehicle users of a local road who have a low interest in the visual aspect of the surroundings. The proposal results in a **Medium** magnitude of change resulting in a **Slight** effect.
VP13	Viewpoint 13 is taken from the core of the historic landscape Belton Fields on an intersection of numerous public footpaths. The photo depicts a small linear field in the foreground, residential dwellings facing the field with surrounding vegetation, and flat landscape in the background consisting of numerous large scale wind farms and plenty of mature tree planting. The wireframe and photomontage illustrate the proposed turbine in context. The wireframe shows that the turbine would be seen far in the distance among the flat landscape. In reality it would be screened by the intervening land cover as depicted on the photomontage. The photomontage shows that the turbine will not be seen in conjunction with the already

	existing wind farm and would be screened by the intervening vegetation. It is considered that the viewpoint has a ***High*** sensitivity, since it represents views of the public right of way users enjoying this historical landscape. The proposed development would not be visible from this viewpoint which represents a **Negligible** magnitude of change resulting in a **Negligible** effect.
VP15	Viewpoint 15 is taken from Moor Road which is also a cycle route and is travelling along the moors. The photo depicts flat landscape, dykes and ditches, dense woodland in the middle ground, and scattered mature tree planting in the distance. There are visible vertical features in the distance in the form of telephone lines and Rainsbutt Chicken Farm is slightly visible in the middle of the picture behind the woodland. The wireframe and photomontage illustrate the proposed turbine in context. The wireframe illustrates that the proposed turbine will be fully visible set within a flat landscape. The photomontage illustrates that the proposed turbine will not be visible from this viewpoint, as it would be screened by the pocket of woodland, which will obscure the whole of the turbine. It is considered that the viewpoint has a **High** sensitivity as it users of the cycle route and views of the residents living on Moor Road. In this viewpoint the proposal results in a **Negligible** magnitude of change resulting in a **Negligible** effect.

Table 4.2 Visual Amenity Impact

Visual Amenity Summary

4.29 Generally it is considered that due to the flatness of the landscape the proposed turbine will be seen from most directions to varying degrees and it is likely that it will be seen in association with other turbine developments within the study area, however not to a degree which would cross the threshold of significance of cumulative effects. The landscape offers open and wide views of the turbine site and therefore the turbine would be a visible structure set within much taller wind farms which are already a key vertical visual detractor for the visual receptors in the immediate surroundings and wider areas.

4.30 On the other hand, the flatness of the landscape also has a tendency to absorb a development such as this, as it offers a lot of intermittent and broken views of the turbine due to existing vegetation and built environment which would enclose wider views from some angles.

4.31 The ZTV map shows that in theory the proposed development will be visible in 80% of areas within 5km radius. The only 'blind spot' would be the Crowle Hill area in the east of Crowle. In reality, it is considered, and it has been proved by numerous site surveys, that the actual visibility of the turbine would be much smaller, as the land cover would provide screening especially for the residents of Crowle and Eastoft. Public views from lanes and isolated dwellings will be screened to a large degree by existing tree planting surrounding individual properties. The Moors to the southeast of the turbine would be a natural obstruction of the wider views from the east and south east direction. The actual visibility from that direction would therefore be lower than what the ZTV shows. As mentioned before, the ZTV analysis provides the worst case scenario and it only considers bare ground topography without taking into account the natural and built environment. Refer to Plan 02 in the Appendix for full ZTV analysis.

4.32 It is considered that the most open and wider views of the proposed development will come from the north. However, within 5km in that direction the area is scarcely populated with no villages or towns affected by the theoretical visibility. There are a number of farmsteads within that range but

they are set within dense mature tree planting which will screen views of the site. Also, at such a distance, the turbine would be a barely distinguishable element among the larger, commercial sized turbines already dominating the landscape. Longer distance views will 'see' the proposed development as an insignificant addition to a partially industrial and disturbed visual setting in which the turbine is located.

4.33 There might also be theoretical wide and open views of the turbine stretching from the northeast, east and southeast, as these areas are generally sparse in population except for the village of Eastoft. It is considered that the road users of the A161 travelling in both directions will have intermittent views of the turbine due to the windy nature of the road, existing vegetation alongside it and therefore the proposal will have an insignificant impact on the views from these aspects. The landscape already has multiple wind farms and the proposed turbine if visible would be viewed against them, therefore it would be a hardly distinguishable additional feature on its own.

4.34 Whilst the turbine will be visible within more open views, the existing turbines, built settlement, agricultural buildings, telegraph poles and wires already detract from the visual setting and the proposal will therefore only result in a small proportional change to viewpoints and will be seen generally against a backdrop of industrial elements and vertical infrastructure. Where views are more localised, intervening vegetation and the topography combine to restrict more open views particularly for road users.

4.35 Residential receptors that could mostly be affected lie within 1km of the site and only include three farmsteads: the applicant's Rainsbutt Farm, Easingwold House and Moors Farm. It has been concluded that the visual impact of the proposed turbine will be insignificant due to the orientation of the principle facades of the dwellings and due to existing tree planting surrounding these properties. Both non-affiliated properties are in excess of 600m of the turbine, which is more than sufficient not to have any negative impact on the amenity of the residents living there.

4.36 In summary, the proposed turbine location is in a large scale, open, flat and low-lying landscape in a remote location far away from any larger residential cluster. The application site is in close proximity to existing wind farms surrounding the site which contribute to the wider visual setting. Views are generally open, but some angles would only provide broken and intermittent views. Within wider views the existing turbines and industrial elements throughout the landscape feature prominently and it is considered that the proposed turbine would result in a small overall degree of adverse visual effects. Although these represent a small proportional change to most existing viewpoints it would represent a new feature within the landscape to more immediate receptors. As such it is considered that the proposal can be accommodated with some adverse effects on the localised visual amenity of the immediate application site and less adverse effects within the wider visual setting. It is considered that the proposed development will have a **Moderate/Slight** effect overall which is less than substantial.

5. CUMULATIVE EFFECTS

5.1 In assessing the cumulative effect of the proposed turbine, a ZTV with a radius of 10km was produced which included up to 55 existing or approved medium to large scale turbines. Please refer to Plan 03 for the CZTV and a list of turbines included in the study.

5.2 The Cumulative Zone of Theoretical Visibility (CZTV) provides the worst case scenario as it takes into account only the landform without natural screening or built environment.

5.3 Within the 10km radius from the application site there are 5 operational large scale windfarms: Goole Fields (16 x 125m from Goole II and 6 x 128m from Goole I), and Tween Bridge Moor (6 x 125m out of 22 operational), and Keadby Wind Farm (13 x 125m out of 34 approved). Another wind farm called Twin Rivers (14 x 110m) has been granted permission but not constructed yet. The total number of large scale, commercial wind turbines within the study area is 55 of 125m+ wind turbines. The application site would be located almost in the

centre of these surrounding wind farms. In the wider area there are more windfarms including Grange and Bagmoor to the east, and Sixpenny Wood to the north of the application site. The proposed single turbine would be almost half the size of the existing turbines and it is considered that it would be barely distinguishable from the distance.

5.4 It is considered that the introduction of a single wind turbine at Rainsbutt Farm would not cross the threshold of significance in terms of cumulative impact. Overall the turbine would be seen in conjunction with the surrounding windfarms and it is believed that the turbine at Rainsbutt Farm will be absorbed and assimilated into the landscape. The turbine would be hard to distinguish from wider views across the landscape, except from the immediate vicinity i.e. within 1km of the application site where it will be a visible feature seen against other wind farms from all aspects. The CZTV which shows that 100% of the study area will have theoretical views of the proposed turbine and other existing/consented turbines. In reality, this is believed to be much lower as the ZTV only takes into account the bare ground, with no land cover, such as vegetation and built environment. It is therefore considered, that the addition of a single wind turbine at Rainsbutt will create an adverse cumulative effect but will not cross the threshold of significance considered unacceptable.

5.5 It is considered that regardless of the direction, the proposed turbine would be absorbed by the existing wind farms which surround the application site. Views from the north, south, east and west will always incorporate wind farms and the proposed turbine would blend in well from a distance. From some viewpoints the landscape character and built environment softens, obscures and reduces any cumulative impact to 'not significant'. Whilst the proposed turbine is most likely to be visible from certain angles in conjunction with the existing windfarms, due to the separation distances between turbines, the smaller scale of the existing and proposed development and baseline landscape features such as a flat landscape featuring built and natural environment it is expected that the turbines will be seen to have a unifying relationship with each other as well as with the surrounding landscape. As a result the proposed turbine is

unlikely to significantly extend the effects of wind turbine development into the wider landscape.

5.6 As illustrated by the cumulative ZTV, in the majority of views where turbines are visible, it indicates that more than one is visible at a time, where the proposal will be seen along with one or more developments within the observer's arc of vision. Hence it shows that where there is potential combined visibility, (100% of the area studied), 0% of the area will have potential views of the proposed single turbine at Rainsbutt Farm only. This would suggest that the proposed development will be seen in combination with the existing turbines in many local and wider views, but due to its smaller size it will not become a prominent feature in the landscape. There may be viewpoints within 1km of the site where the proposal will be seen in sequential views within 1km whereby the observer would have to move from one location to another to view multiple wind turbine developments.

5.7 The visual grouping of the turbines is considered to not impact adversely on wider views and the cumulative effect is one of integration rather than of detrimental effect to the wider visual setting and landscape character, which already contains multiple vertical detractors. Whilst there is intervisibility between the developments, the viewpoint analysis demonstrates that this intervisibility can be considered limited in nature. The cumulative effects can be considered reversible due to the temporary nature of the proposed development (usually 20-25 years). It is considered that this results in an overall **Moderate-Slight Adverse** cumulative effect within the localised study area and a negligible adverse cumulative effect within the wider study area.

6. SUMMARY AND CONCLUSIONS

6.1 This report has addressed issues relating to the anticipated potential impacts upon the landscape character and visual amenity of the study area likely to result from the erection of a single wind turbine at Rainsbutt Farm, Crowle, North Lincolnshire. The application site is situated within a field that is currently

used for arable farming, which is set within a large scale open, low-lying landscape.

6.2 It is considered that the effect of the proposal on the landscape designations, heritage assets and landscape features will be **Moderate** overall. The proposal will have no direct effect on the characteristics or features of any designated landscape or heritage assets. The only potential effects would be 'indirect', affecting the visual setting of such designations. Landscape features of the localised setting and wider landscape character will remain unaffected, although there will be a degree of impact on the immediate site as a proportion of arable land will be lost to the proposal resulting in a slight adverse effect. The location of the proposal and its relationship to existing turbines in the locality is such that the proposed turbine will be seen within the context of a wider landscape character area that already includes a proportion of both industrial and existing infrastructure elements as well as more rural and tranquil areas; as such the wider landscape character will remain unaltered. The proposed turbine is considered to be able to be accommodated into the landscape without a detrimental effect to the localised and wider landscape character.

6.3 It is considered that the effect of the proposal on visual amenity will be **Moderate-Slight** overall. The proposed turbine's location is within a predominantly unified, flat and simple area set against existing wind turbines and industrial elements contributing to the wider visual setting. Views are generally open, with a small number of local visual receptors affected by the proposal, due to the relative remoteness of the site. Within wider views, the existing turbines and industrial elements from views from the east feature prominently. It is considered that the proposed turbine would result in a degree of adverse visual effects. Although these represent a small proportional change to most existing viewpoints, it would represent a new feature within the landscape. As such, it is considered that the proposal can be accommodated with some adverse effects on the localised visual amenity of the immediate application site and less adverse effects within the wider visual setting.

6.4 The CZTV analysis indicates that the proposed turbine will not cause additional cumulative effects by the introduction of the single turbine on the immediate and wider landscape which already consist of large scale wind farms. It is considered that this results in an overall **Moderate-Slight Adverse** cumulative effect within the localised study area and a **Negligible Adverse** cumulative effect within the wider study area.

6.5 It is acknowledged that the introduction of the proposed turbine to the landscape will represent a degree of change to both the landscape character and visual aspects of the study area. However, the degree of change is considered to be able to be accommodated without significant adverse impact to either the landscape character or visual amenity. For the most part the introduction of the single turbine will represent a low to medium magnitude of change to only a proportion of views within the localised study area and will be seen within the context of a number of existing turbines. It contributes to a landscape character that already features both wind turbines and vertical elements of industrial infrastructure. It remains our conclusion that the introduction of the turbine can be accommodated without significant effect or significant cumulative effect to both the landscape character and visual amenity.