

Green Farm Solar Project
Barkestone-le-Vale, Leicestershire

Landscape and Visual Impact Assessment

Prepared for Green Farm Solar Ltd

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NOTE:

This report to be read in conjunction with the
accompanying reports:

LVIA Plans and Representative Views

Landscape and Ecology Management Plan (LEMP)

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2. EXECUTIVE SUMMARY

2.1.1. Through a detailed landscape and visual assessment, this is assessed as a good site for solar energy production.

2.1.2. The site has a moderate sensitivity to solar energy production and there are no assessed adverse effects upon landscape character. The proposal provides an opportunity to improve the described landscape character, in the medium and long-term, through changing landscape management regimes which will increase biodiversity as well as enhancing the tree and hedgerow cover in this flat and relatively intensively farmed landscape.

2.1.3. The main direct views towards the site, which will experience moderate to slight and adverse effects prior to mitigation are from a footpath which runs close to, and adjacent to, the south-west sector of the site (especially field enclosure H). These views can be mitigated, but not screened completely. Once mitigation planting has established, within 5 years the residual effect is likely to be moderate and slightly adverse. Beyond 10 years, the effect will become slight and not adverse. In addition to mitigation screening, it may be possible, in the short term, to enhance views from these properties through careful landscape master planning. This is shown within the accompanying Landscape and Ecological Management Plan (LEMP).

2.1.4. From public roads and all other footpaths within the ZTV, the visual effect is slight, or negligible. In all cases, any assessed adverse effects at the construction phase will experience a reduced residual effect quickly as hedgerows are allowed to establish and mitigation planting establishes.

2.1.5. The remaining assessed viewpoints will experience a neutral effect - no change to the view, or a negligible change which is not assessed as significant and which is not adverse.

2.1.6. The site is located on low-lying flat land. At a national and regional scale, this type of site is favoured for solar energy production over undulating of higher ground as the effects upon landscape character and visual receptors are greatly reduced.

2.1.7. The proposal is to install solar arrays within the existing hedged field boundaries. No hedgerows are to be removed such that the pattern of landscape remains as the baseline condition, and as described in landscape character areas descriptions.

2.1.8. At a local level, the landscape character is rural and tranquil with the surrounding countryside free from any significant modern development. However, while the proposal will bring a new modern addition to the site it will not affect the field patterns or vegetation character of the area. The site has no landscape designations.

2.1.9. The significance of the effect upon landscape character is assessed as slight rather than neutral. This is principally due to the addition of new human scale features.

2.1.10. Described landscape characteristics, especially those listed in landscape management guidelines, will be enhanced by changing intense agricultural practice into a less-intense, nature-led, approach to landscape management. This will have benefits upon local biodiversity, as well as, reducing any residual visual effects.

2.1.11. The effect upon visual receptors is assessed in the range moderate to negligible. No assessments of very large or large effects were recorded. The site lies on low lying land in a

comparatively wide-open landscape, with views towards the site hard to find from most directions.

2.1.12. The exception are views from the immediate south and south-west where the site is visible from a public footpath which runs close to, and along, the southern boundary of the site. The magnitude of effect from these viewpoints is assessed as moderate and adverse and experienced by medium sensitivity visual receptors (footpath users). However, the small number of receptors gives rise to an overall assessment of moderate to slight and triggers a recommendation of some mitigation measures to reduce adverse effects.

2.1.13. These mitigation measures will not fully screen the proposal and the residual effect, following the construction phase, will remain moderate to slight and adverse from these viewpoints. It is important to note that these effects are upon the land cover within the field enclosures themselves, rather than any changes to landscape pattern or wider views which will remain unchanged. It is principally a visual change from one material (agricultural crops) to another (solar arrays), but with a potential change to perceptions of the landscape view based upon an individual's response to this type of landscape change.

2.1.14. Glimpse views across a succession of hedgerows and through existing boundary vegetation are possible from dwellings and footpaths at Sutton Lane, Sutton. These views are between 1.4-1.7Km from the site boundary and form a small part of the overall view.

2.1.15. From all other assessed viewpoints the effect will be negligible or visual receptors will experience no change to the view.

3. INTRODUCTION

3.1. BACKGROUND AND SCOPE OF THE STUDY

3.1.1. Richard Sneesby Landscape Architects were approached by Savills to complete Landscape and Visual Impact Assessment (LVIA) documentation in support of a solar energy production site at Green Farm, Barketstone-le-Vale, Leicestershire (hereinafter referred to as 'The Site').

3.2. THE SITE

3.2.1. This LVIA Report assesses the landscape and visual effects of developing a 49.9MW solar energy production site upon surrounding receptors. The site is situated at central Grid Reference SK 77229 35892. The Site lies to the west of Barketstone-le-Vale village with a disused canal running north-east to south-west between the village and the site.

3.2.2. The Site is low lying on comparatively flat land and comprises 8 rectilinear field enclosures, extending to approximately 174.7 acres (70.7Ha), most of which are surrounded by native species hedges. The land rises slightly to the west to a low ridge line with houses along the ridge at Sutton and Granby. Part of the eastern boundary adjoins woodland which runs along the route of the disused Grantham Canal and provides visual screening from the east. On the west side of the site is a large woodland copse. A public footpath runs along the south-western boundary of the site and a second footpath along the western boundary.

3.3. THE STUDY AREA

3.3.1. The study area is taken as a 5Km radius from the development site. Further site work extends this, from key viewpoint directions, to include other areas from where there is visibility of the site from the surrounding area.

4. METHODOLOGY

4.1.1. This section briefly describes the methodology and sequence of stages in the assessment process. Details of judgement criteria are included in Appendix 1.

4.2. BEST PRACTICE GUIDANCE

4.2.1. A full desk-survey was carried out to review policies and guidance available from Leicestershire LPA and Melton Borough Council, relating to proposed developments.

4.2.2. Designated landscapes were identified and recorded to establish the sensitivity of the site to change.

4.2.3. The Visual Impact Assessment was carried out in accordance with the guidance set out in the Landscape Institute publication: Guidelines for Landscape and Visual Impact Assessment (2013).

4.2.4. A site visit was carried out in July 2020 to assess the likely impacts within the study area. The weather was dry with full sun in the morning turning overcast in the afternoon. Trees were in full leaf, with less visibility to and from the site compared to mid-winter.

4.3. LANDSCAPE AND VISUAL IMPACT ASSESSMENT

4.3.1. Landscape and Visual Impact Assessment (LVIA) is a well-established tool to identify the effects of change resulting from development and the significance of those effects. It distinguishes between: Effects

- Effects on landscape as a resource in its own right; and
- Effects on specific views and general visual amenity experienced by people.

4.3.2. The LVIA should be proportional to the scale and nature of the development proposal. For this proposal, the scale and nature of the development is described in the scoping process which describes what has been assessed and details those aspects which are considered most relevant to the proposal.

4.4. LANDSCAPE EFFECTS

4.4.1. The European Landscape Convention 2000 defines landscape as:

“An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”.

4.4.2. This covers not only landscapes that are recognised as being special or valuable, but also landscapes which can be considered ordinary or every day. These are landscapes where people live, work, and spend leisure time - a setting for their day-to-day lives, and for aesthetic enjoyment. Furthermore, landscapes are considered as environment - for biodiversity, flora, and fauna.

4.4.3. LVIA requires that the landscape is assessed by recording and recognising:

- Protected landscapes and townscapes.
- The contribution the landscape character has on sense of place and quality of life; and the way change may affect:
- Individual components of the landscape
- Aesthetic and perceptual qualities
- The character of the landscape in different areas
- Visual effects

4.4.4. Assessment of the visual effects of the proposed development focuses on the following principles:

- How the surroundings of individuals/groups of people may be affected by changes to the landscape
- How people will be affected by changes in views and/or visual amenity at different places
- To identify impacts various visual effects are assessed:

- The areas from which the development may be visible
- Different groups who may experience views of the development
- The places where they will be affected
- The nature of the views and visual amenity at those points
- Changes in specific views.

4.5. ASSESSMENT OF SIGNIFICANCE

4.5.1. The significance of the proposal is assessed against two key criteria:

- i. The significance of the receptor. This involves making judgements about the susceptibility of the receptor to the type of change arising from the proposal; and the value attached to the receptor.
- ii. The magnitude of change. Judgements are based upon the size and scale of the effect (for example, is there a complete loss of a particular element or a minor change); the geographical extent of the areas that will be affected; and the duration of the effect and its reversibility.

4.5.2. These assessments lead to judgements on the individual criteria and how these, in combination, provide a means of describing the significance of the proposal. This involves combining judgements of both the significance of the receptor and magnitude of change in order to demonstrate:

- How the value of the receptor and its susceptibility of change contribute to its sensitivity to the effects.
- How judgements about the scale of the proposal, its geographical extent and duration of the effect contribute to judgements about the magnitude of the effects; and
- How the resulting judgements about sensitivity and magnitude are combined to inform judgements about the overall significance of the effects.
- The assessments describe effects which can be significant and non-significant.

4.6. METHODOLOGIES USED IN THE ASSESSMENT PROCESS

4.6.1. Desk Study

- Receiving information from the developer and other consultants
- Identifying the site location and its surroundings using Ordnance Survey maps, aerial photographs, and development site plans
- Familiarisation with the details of the proposals.
- Use of LPA and District Council planning portals to acquire information on landscape designations, Rights of Way, landscape character assessments, areas for Conservation Action, local topography and patterns of vegetation and any other information which may be relevant.

4.6.2. Field Survey

- Visits to the site to confirm, or otherwise, the understanding of the site and proposals gained through the desk study.

- Production of a photographic record of site features, landscape elements and details not revealed by maps or aerial photographs.
- Checks to confirm visibility, key viewpoints, and visual receptors.
- Professional judgements which could be made about possible alterations to the design of the proposal and/or mitigation measures to address any possible negative judgements about the significance of the proposal.

4.6.3. Assessment

- Assessment of the significance of landscape and visual receptors, the susceptibility of the receptor to the type of change arising from the proposal; and the value attached to the receptors.
- Assessment of the magnitude of change based upon the size and scale of the effect; the geographical extent of the areas that will be affected; and the duration of the effect and its reversibility
- Assessment of the sensitivity to the effects and the magnitude of the effects
- Assessment of the overall significance of the effects
- Summary statements describing both significant and non-significant effects
- Assessment, where appropriate, of cumulative effects based upon available information.

4.6.4. Influences on design

- Assessment of changes to the proposal to minimise negative impacts and recommendations for mitigation measures.
- Presentation of findings
- Production of this written report, supporting plans, maps, photographs, and mitigation measures.

4.7. PRODUCTION OF ZONES OF THEORETICAL VISIBILITY (ZTV)

4.7.1. Purpose and Limitations

4.7.2. A Zone of Theoretical Visibility (ZTV) is a computer-based modelling exercise, undertaken to assist the landscape professional in carrying out a Landscape and Visual Assessment (LVA) of a development. The ZTV provides a guide as to the potential location of possible viewpoints, for further evaluation. As a ZTV is theoretical, it should not be used in isolation and, as part of the assessment process, requires on-site verification.

4.7.3. A ZTV is subject to a number of limitations, in particular:

- the terrain data may be of limited resolution and, therefore, may not fully represent all local variations in topography, including features such as banks, roadside cuttings etcetera.
- other screening features, such as buildings, fences, trees, and hedges are not routinely incorporated into ZTVs, due to the complexity and detail of such objects.

4.7.4. Tests have been carried out to compare the accuracy of a GIS-based ZTV mapping programme and Google Earth's terrain-based Viewshed software. The results are

remarkably similar and, given the limitations of a bare-earth ZTV, are considered appropriate to establish a visual baseline which is then tested at the site survey

4.7.5. Accordingly, an indicative ZTV was generated using Google Earth's Viewshed software. The height was set at 4m above existing ground level to illustrate the visibility of roof ridgelines.

4.8. PHOTOGRAPHIC SURVEY AND PHOTOGRAPHS FROM REPRESENTATIVE VIEWPOINTS

4.8.1. Site photographs were taken using a Canon 750D digital SLR cropped frame camera. Site photographs used to illustrate representative views were taken using a focal length of around 35mm - equivalent to a 50mm focal length lens on a full frame camera. This is the closest equivalent to human eye views.

4.8.2. Photographs were printed and tested against the human eye equivalent from the viewpoint.

4.8.3. Many of the views are wide and panoramic. Panorama views were taken using a tripod mounted camera.

4.8.4. To help illustrate the wider contextual view, some photographs were stitched together using Microsoft Image Composite Editor software without loss of resolution.

4.9. ILLUSTRATION OF THE EFFECT OF THE DEVELOPMENT UPON REPRESENTATIVE VIEWPOINTS

4.9.1. Photomontage 'before and after' images have not been produced at this stage.

5. POTENTIAL LANDSCAPE EFFECTS OF FREE-STANDING SOLAR PV DEVELOPMENTS

5.1.1. People's response to landscapes (both rural and urban) and the forces that act on them are personal and may change over time according to their cultural values. For example, there are varying attitudes to wind energy development depending on individual attitudes to the principle and presence of wind energy generation.

5.1.2. In order to minimise effects on the landscape through siting and design, it is important to first understand the characteristics of free-standing solar PV development and how they may affect the landscape (and in turn economic, social and community values).

5.1.3. Free standing solar PV developments, although not particularly prominent in height, can occupy substantial areas of ground which may be visible, particularly if located on slopes. Landscape effects may include the following:

- i. Single panels or small rows of panels on farms will have less of an impact than 'field-scale' developments that may be accompanied by buildings/ cabinets, tracks, and securityfencing.

- ii. As extensive developments, field-scale solar PV developments may be particularly visible in open landscapes or on upper slopes of hillsides, especially where covering significant areas. Undulating land can exacerbate the effect.
- iii. Solar panels, en-masse, tend to reflect the sky - for example, on a sunny day they can appear blue while on a cloudy day they can appear a metallic grey - this can make them stand out from their landscape context.
- iv. The perceived urban/industrial character of large areas of free-standing solar PV panels and associated infrastructure means they can increase the perceived human influence on the landscape and erode sites with an intrinsically rural character, including landscapes that form a setting to heritage assets.
- v. Solar PV developments will change the land use and appearance of a field or fields, affecting land cover patterns and the character of landscapes.
- vi. The regular edges of solar PV developments may be conspicuous in more irregular landscapes (particularly where they do not follow contours or where field boundaries are irregular in form).
- vii. The height of racks (up to 3m) means that they may overtop typical hedgerow/hedgebank field boundaries.
- viii. Screen planting around solar PV development, or management changes such as allowing hedges to grow higher, can change the sense of enclosure of a landscape.
- ix. Construction of the solar PV development may result in damage to landscape features such as hedgerow/hedgebank field boundaries.
- x. Structures, including free-standing panels, security fencing, and other hard, built elements, can appear out of place in landscapes that are perceived as wild, natural, or remote from development, and that are valued for these qualities.
- xi. Ancillary buildings and security requirements (such as fencing and/or CCTV) may introduce new and unfamiliar features into a rural landscape.
- xii. Access tracks will be necessary on field scale schemes with central inverters (central inverters cannot be delivered and maintained using temporary tracks).

5.1.4. Photovoltaic technology requires absorption of sunlight to allow for the conversion of energy to take place and therefore very little light energy is lost through reflection. Glare is further minimised through the use of translucent coating materials to improve light transmittance through the glass³⁸. Nevertheless panels do change under different atmospheric conditions, tending to reflect the light and colour of the sky, and the appearance of the panels under different atmospheric conditions is an important consideration in terms of the visual effects of schemes.

6. BASELINE CONDITIONS

6.1.1. Baseline conditions are described for both landscape and visual receptors within the study area. The landscape character baseline is set by the areas which directly effect, and are affected by, the development proposal. In the main this means the landscape within which the proposal will have visual and perceptual influence. For the visual baseline, the study has focused upon those areas which have been revealed as having potential impacts through the site visit and analysis of site plans, area maps and aerial photographs.

LANDSCAPE CHARACTER BASELINE

6.2. NATIONAL CHARACTER AREAS

The site lies within Natural England's National Character Assessment Area NCA Profile 48: Trent & Belvoir Vales.

The key characteristics of NCA Profile 48 are:

- A gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales, and flood plains. The mature, powerful River Trent flows north through the full length of the area, meandering across its broad flood plain and continuing to influence the physical and human geography of the area as it has done for thousands of years.
- The bedrock geology of Triassic and Jurassic mudstones has given rise to fertile clayey soils across much of the area, while extensive deposits of alluvium and sand and gravel have given rise to a wider variety of soils, especially in the flood plains and over much of the eastern part of the NCA.
- Agriculture is the dominant land use, with most farmland being used for growing cereals, oilseeds, and other arable crops. While much pasture has been converted to arable use over the years, grazing is still significant in places, such as along the Trent and around settlements.
- A regular pattern of medium to large fields enclosed by hawthorn hedgerows, and ditches in low-lying areas, dominates the landscape.
- Very little semi-natural habitat remains across the area; however, areas of flood plain grazing marsh are still found in places along the Trent.
- Extraction of sand and gravel deposits continues within the Trent flood plain and the area to the west of Lincoln. Many former sites of extraction have been flooded, introducing new waterbodies and new wetland habitats to the landscape.
- Extensive use of red bricks and pantiles in the 19th century has contributed to the consistent character of traditional architecture within villages and farmsteads across the area. Stone hewn from harder courses within the mudstones, along with stone from neighbouring areas, also feature as building materials, especially in the churches.
- A predominantly rural and sparsely settled area with small villages and dispersed farms linked by quiet lanes, contrasting with the busy market towns of Newark and Grantham, the cities of Nottingham and Lincoln, the major roads connecting them and the cross-country dual carriageways of the A1 and A46.
- Immense coal-fired power stations in the north exert a visual influence over a wide area, not just because of their structures but also the plumes that rise from them and the

pylons and power lines that are linked to them. The same applies to the gas-fired power station and sugar beet factory near Newark, albeit on a slightly smaller scale.

6.3. LEICESTERSHIRE COUNTY COUNCIL LANDSCAPE CHARACTER TYPE: VALE OF BELVOIR (MELTON). The effect of the development upon this description is covered in section 7.3

6.3.1. The site lies within Leicestershire County Council's Character Area - Vale of Belvoir (Melton).

6.3.2. This section covers the assessment carried out in 2017 by LUC and is included in the LUC Report "Landscape Sensitivity and Green Infrastructure Study for Leicester and Leicestershire" October 2017

6.3.3. The Landscape Character Area Profile summarises the key characteristics of Vale of Belvoir as follows: This area is situated in the northern part of Melton District, forming part of a larger vale that continues to the north into Nottinghamshire. This is a flat, expansive landscape, divided into rectangular fields bound by hedges which are under a mixture of pastoral and arable use. Trees are generally sparse and are found in hedgerows and along the Grantham Canal winds through the vale. Nucleated villages occur throughout the vale with vernacular buildings constructed of local stone. Roads are generally straight and narrow, excepting the A52 which crosses the area near Bottesford. The topography and limited tree cover enable long views, particularly to the adjacent Belvoir escarpment which forms a focal point to the south. Church spires in the villages are prominent and distinctive skyline features, providing a sense of orientation within the landscape.

Physical character (including topography and scale)

6.3.4. Predominantly flat and expansive low-lying landform with very gentle undulations and punctuated by occasional hills including Beacon Hill (61 metres) and Slyborough Hill (106 metres). The vale is contained by the Belvoir escarpment to the south. Fields are rectangular and vary in size, tending to be smaller when located close to settlements and enclosed by low hedgerows with occasional trees. Canals, becks, and dykes lined by trees (mostly willows), cross the landscape.

Natural character

6.3.5. Areas of semi-natural grassland (including some which are designated as Local Wildlife Sites) are scattered amongst the more intensively used arable farmland. Small areas of pasture occur close to settlement. There are occasional small blocks of woodland, including fox coverts. Grantham Canal is lined with trees and forms a distinctive linear feature in the character area and is important for habitat connectivity. The canal is nationally designated as a SSSI. Muston Meadows is a National Nature Reserve recognised for its lowland meadow habitat. Thick hedgerows and wide grass verges amongst the farmed landscape also offer wildlife interest.

Historic landscape character

6.3.6. Field patterns are generally modern in origin, although evidence of ridge and furrow is visible in places. A number of moated sites are designated as Scheduled Monuments. Grantham Canal was important for the transportation of coal during the industrial period. The stone constructed nucleated villages include Conservation Areas at Long Clawson, Redmile, Bottesford, Stathern and Hose. The churches within these villages are also often of historic significance, with many designated as Grade I or II* Listed Buildings.

Form, density and setting of existing development

6.3.7. Small, nucleated villages of a redbrick, ironstone and whitewash vernacular are scattered throughout the area, with isolated farms found along the straight lanes which traverse the area. The villages are well integrated into the landscape and have not expanded significantly in the last century, although some areas of more recent addition to settlement create hard urban edges, including linear development in the east of Bottesford and south of Long Clawson. The flat landscape of the vale provides a rural, agricultural setting to the settlements, with the adjacent Belvoir Scarp also providing a setting and sense of place.

Views and visual character including skylines

6.3.8. Church spires in the villages form prominent vertical features on the mostly undeveloped skyline. The flat landform and limited tree cover enable long views across the open landscape of the vale. Where hedgerows and trees are more frequent, views are limited. There are good levels of intervisibility with the Belvoir escarpment, which forms a wooded skyline with the distinctive form of Belvoir Castle also visible across much of the area. In places, there are long views across the countryside into Nottinghamshire (to the north). Pylon lines cross the landscape near Stathern and Bottesford.

Perceptual and experiential qualities

6.3.9. A tranquil, rural character can be experienced throughout the landscape, although noise from the railway, the A52 and other busy roads can detract from tranquillity locally. The landscape is intensively farmed, and where hedgerows have been lost, there is a localised sense of exposure. In the south west of the landscape, an MOD Site and Old Dalby business park introduce large gates, fencing and barbed wire which can detract from the rural qualities of the vale.

Evaluation of criteria and landscape sensitivity judgement

6.3.10. The landscape is considered to have moderate sensitivity to residential development and moderate-high sensitivity to commercial development due to the historic settlement pattern of the nucleated stone villages, the open character of the vale, with church spires forming distinctive skyline features, the intervisibility of the landscape with the adjacent Belvoir escarpment and the rural character of the area. The landscape is more sensitive to larger scale commercial development which is likely to be intrusive in the open, flat character of the vale.

Key landscape sensitivities to development within the area

6.3.11. The following attributes and features of the landscape would be particularly sensitive to development:

- Valued semi-natural habitats, including areas of semi-natural grassland and the important linear feature of Grantham Canal.
- Nucleated villages (often within Conservation Areas) constructed of local stone. Well integrated into the landscape with surrounding woodland.
- Remnant areas of ridge and furrow within the intensively farmed landscape.
- Notable views towards Belvoir Castle and the Belvoir escarpment to the south.
- The expansive character of the vale, with the spires of historic churches forming prominent skyline features.
- High levels of tranquillity and strong rural character.

Landscape and Green Infrastructure guidance and opportunities

6.3.12. The following guidance and opportunities to conserve and enhance landscape character and Green Infrastructure should be considered within this Landscape Character Area:

- Retain valued areas of semi-natural habitat which occur amongst the intensively farmed land and create linkages where appropriate. Maximise the use of sustainable agricultural practices that protect and enhance ecological networks.
- Ensure that development does not detract from the setting of historic buildings and settlements. Ensure materials complement the existing vernacular.
- Ensure that development does not detract from or interrupt views to and from the adjacent Belvoir escarpment.
- Avoid siting new development in areas where it would be widely visible within the open character of the vale.
- Retain the valued rural character of the vale and avoid urbanising influences.
- Plan for successful integration of potential new development in the landscape through sensitive design and siting, including use of sensitive materials and use of landscape mitigation to enhance sense of place. Promote better integration of existing settlement edges into the landscape.
- Plant hedgerows, hedgerow trees and small woodlands to improve habitat connectivity and replace those lost to past intensification/development. Ensure existing hedgerows are managed appropriately.
- Improve habitat and access linkages with Grantham Canal (a priority GI enhancement area and SSSI) which forms an important linear GI feature crossing the vale. Seek to improve the biological condition of the canal.
- Establish access routes along the length of the Grantham Canal as some areas are inaccessible. Disused railways within the landscape could be cleared and multi-use trails created to supplement access to the Canal.
- Promote and seek opportunities to enhance the Cross Britain Way and National Cycle Route 15, which cross through the area.

References

Melton Borough Landscape & Historic Urban Character Assessment Report (March 2006)

Melton Landscape Character Assessment Update 2011 (February 2011)

Melton Borough Areas of Separation, Settlement Fringe Sensitivity and Local Green Space Study (September 2015)

A Green Infrastructure Strategy for Melton Borough (November 2011)

6.4. LANDSCAPE DESIGNATIONS

6.4.1. The site has no national or local landscape designations.

6.5. VISUAL BASELINE

6.5.1. To identify and assess the visual impact of development on the surrounding area the capacity of the site to accommodate change has been reviewed through a site visit, the collection of photographic data which illustrates the key visual receptors which are affected by possible development and using a computer-generated model and photomontage images.

6.5.2. Bare earth ZTV maps have been generated and cover the 5Km study area:

6.5.3. The bare earth ZTV model shows the theoretical visibility towards the site from the surrounding area based upon topography alone. It is useful inasmuch that it reveals widespread theoretical visibility from much of the study surrounding the site, especially from the hills to the east, as well as potential viewpoints to the north and north-west.

6.5.4. However, this form of modelling is increasingly unhelpful where the landscape contains many buildings or large trees as is the case within the site itself and the countryside surrounding Foston.

6.5.5. To test this, the areas which are shown within the model as having theoretical visibility have been visited to assess the actual visibility of the site and recorded through the selection of a number of representative viewpoints which were recorded photographically.

6.6. VISUAL ENVELOPE

6.6.1. The site lies on flat land west of Barkestone-le-Vale.

6.6.2. The ZTV reveals that the majority of theoretical views are within an arc extending from the north, through west, to south. Views from the east are limited by topography with no views from Barkestone-le-Vale Village.

6.6.3. The main visual receptors are found at Sutton village; from a public footpath which crosses the site at its southern end; and from elevated bridges which cross the disused canal which runs along, and close to, the eastern boundary of the site.

From the north

6.6.4. Northerly viewpoints are the least sensitive to solar energy production sites as views will be towards the rear of the panels where they can appear as a succession of dark shadow lines in the landscape.

6.6.5. Three viewpoints were assessed from northerly locations (Viewpoints 1-3). A single dwelling at Glebe Farm has theoretical views towards the site. No views were recorded at ground level, although it may be possible to see glimpse views towards the site from upper storey windows.

6.6.6. From all northerly viewpoints individual field enclosures are indistinct and changes to the baseline views unlikely to be apparent or significant.

From the west

6.6.7. South-westerly viewpoints have a comparatively high sensitivity to solar energy production sites as oblique views will be towards the side and front of the panels where they can appear as a broken sheet (parallel lines) of PV material. Views directly from the west and north-west are less sensitive as they will be of side elevations with parallel lines of angled panels, but less obvious views of the front sheets. Viewpoints were assessed within the ZTV area with all visual receptors in the north-western sector with less sensitivity towards solar arrays.

6.6.8. Sutton is a ribbon development village which sits on a ridgeline to the west and which overlooks the site. A number of public footpaths run between the village and the site. Two viewpoints were assessed from Sutton (Viewpoints 4 & 5). From these elevated locations the site is visible as a series of thin pockets, each surrounded by mature hedgerows, such that the appearance is of a fine detailed patchwork of boundaries and small field openings.

6.6.9. From the south-west, the site is hidden by topography or mature vegetation. No views were found in the village of Granby or the PROW network which is found north and east of Granby village (Viewpoints 6 & 7).

6.6.10. Footpaths run from a point south-west of Jericho Covert and Jericho Barn towards Main Road. The site is not visible from this footpath (Viewpoint 8).

6.6.11. A public footpath connects just north of Jericho Lodge and runs south-easterly, south of Fields B & C, before running along the south-west corner of Field H. The travelling south-east, the sequence of views shows that the site becomes increasingly apparent (Viewpoints 9 & 10).

From the south and south-east

6.6.12. Southerly viewpoints are the most sensitive to solar energy production sites as views will be directly towards the front of the panels where they can appear as a continuous sheet of PV material.

6.6.13. The main views into the site are from the south and south-east.

6.6.14. Two viewpoints have clear views into the site. Viewpoints 11 and 12 are taken from the public footpath which runs cross the south-west boundary of the site. From here the solar arrays will be highly visible adjacent to the footpath and covering the host field immediately north of the path. Mitigation will be needed to reduce these effects.

6.6.15. Viewpoint 13 is taken from a bridge which crosses the disused Grantham Canal. In a flat landscape, this slightly elevated viewpoint will have views across the site looking north-west. From here there may be glimpse views of tops of the solar panels behind a succession of field boundary hedgerows. Allowing the hedgerows to grow will quickly screen the panels from this location.

Inter-visibility between the site and Belvoir Castle

6.6.16. Because of the national significance of Belvoir Castles and its visual prominence within the surrounding landscape, a separate study was carried out to theoretically assess the inter-visibility between the castle and the site.

6.6.17. Belvoir Castle is located approximately 4.7Km east of the site at its nearest point on the western boundary. There is no inter-visibility to and from this part of the site.

6.6.18. The only part of the proposed site with inter-visibility is in the extreme north-west sector (Refer Viewpoint 14). From here the castle is visible 5.3Km distant and lies outside the study area. Views from the castle were not assessed, but it is assessed that, at this distance, any glimpse views of the solar panels will be such a minor part of the wider view to be insignificant and not adverse.

6.7. VISUAL RECEPTORS

6.7.1. The following visual receptors were assessed:

- Settlements
- Residential properties
- Public Rights of Way and transport links

Settlements

6.7.2. Only those settlements which have a visual or perceived connection to the site are included. The site is only visible from the east. The main settlements, marked on the OS 1:25,000 maps are:

- Barkestone-le-Vale (no visual connection)
- Sutton (some visual connection from houses along the western side of Sutton Lane)
- Granby (no visual connection)
- Plungar (no visual connection)

Residential Properties

6.7.3. In accordance with the GLVIA guidelines residential receptors have not been assessed on an individual basis. The viewpoints have been selected to illustrate visibility from representative viewpoints and, where possible, these have been taken as close to those residential receptors which are likely to be most affected as possible.

6.7.4. There are a small number of residential properties with actual or potential views towards the site:

- Glebe Farm (possible glimpse views across a succession of hedgerows)
- Old Hill Farm (possible glimpse views across a succession of hedgerows)
- Vale Lodge (unlikely to have any visual connection)
- Houses on west side of Sutton village (glimpse views across a succession of hedgerows)
- Granby Lodge (no visual connection)
- The Lodge (derelict) - strong visual connection if renovated.

6.7.5. It is possible that additional residential properties may have visibility of the proposed development, especially in winter.

Public Rights of Way and transport links

6.7.6. The Public Rights of Way and transport links from which the site can be seen are listed below:

Roads

6.7.7. The proposed development will be visible from the following public roads to varying degrees as these routes undulate across local topography and move in and out of built-up areas, past scattered buildings, and along sections in cuttings, with high hedgerows and tree cover. Some views will be open and uninterrupted whilst others may occur as glimpses.

- Main Road - Minor road along northern boundary of the site between Redmile and Sutton/Whatton

Footpaths

6.7.8. The following lists footpaths which fall within the ZTV and which were surveyed.

- NT:7025 (Granby BW20) - Bridleway running immediately adjacent to the north-western site boundary (field enclosure A)
- LT:1218 (G18/1) - Footpath connecting the above bridleway to Jericho Lane, the un-made access road, between Jericho Lodge and Barkestone-le-Vale.
- LT:1254 (G3/1) - Footpath funning north-east away from Main Road, a minor road connecting Redmile to the south-east with Whatton, north-west of the development proposal site.
- NT:4900 and NT4901 (Granby FP3) - Footpath running generally south-east from the edge of Sutton to the north-east to Barkestone to the south-west, via the bridge over the Grantham Canal.

#NT:4903 and #4904 (Granby FP4) - Footpath connecting Granby with Sutton running to the south and east of Granby and connecting with FP3 to the north-east of Granby Lodge.

7. ASSESSMENT OF EFFECTS AND SIGNIFICANCE

7.1. LANDSCAPE EFFECTS - GENERALLY

7.1.1. Assessment of sensitivity of the landscape to change

The criteria used for assessing site sensitivity to both landscape and visual receptors are summarised in the table in Appendix 1.

The sensitivity of the site to accommodate changes to the landscape is assessed in the range:

Very High - High - Medium - Low - Negligible

7.1.2. Assessment of the magnitude of effect upon the landscape

The criteria used for assessing the magnitude of impact is summarised in the table in Appendix 1

The magnitude of change to the landscape is assessed in the range:

Major - Moderate - Minor - Negligible - No Change

7.1.3. Assessment of sensitivity and magnitude combined - Significance of effect

To report on the overall significance of the proposal on both landscape and visual receptors the sensitivity of the site and the magnitude of change are assessed in combination. The outcomes are reported using descriptive terms rather than numerical scores and the terms used are summarised in Appendix 1.

The significance of the effect of the proposal upon the landscape is assessed in the range:

Very Large - Large - Moderate - Slight - Neutral

7.1.4. Valency

7.1.5. The outcome can be both positive - i.e. the proposal makes a beneficial change to the landscape; and negative - the proposal will result in an adverse change to landscape character and visual character. Effects are defined as adverse, neutral, or beneficial. Descriptions of these are shown in the table in Appendix 1.

7.2. EFFECT OF THE PROPOSAL UPON CHANGES TO THE LANDSCAPE CHARACTER

Environmental change without the works

7.2.1. In the event of the proposed development not being implemented, the site would remain as described in the baseline assessment.

7.2.2. Introduction to the development and its potential to generate landscape and visual effects

Landscape effects - generally

7.2.3. Landscape effects can be both direct and indirect. Direct effects include permanent or temporary changes to townscape features such as buildings, vegetation (especially large mature trees or woodland), streetscape (roads, boundary treatments), marine infrastructure (sea walls, jetties, etc.). Indirect effects include those on the character of adjacent landscapes where temporary or permanent effects may occur through visual intrusion from, for example, lighting effects.

7.2.4. These effects may be positive (beneficial) or negative (adverse) or involve no change to the baseline (neutral). Most usually, adverse effects are on sensitive natural landscapes and sensitive, usually historic, townscapes. Where developments result in enhancement to damaged or degraded landscape of townscapes they are generally considered to result in positive (beneficial) changes.

7.2.5. Townscapes which are more sensitive to development include Conservation Areas, presence of listed buildings and protected trees, areas recognised for their historic integrity, and places cited in art and literature.

Visual effects - generally

7.2.6. Direct visual effects include temporary or permanent changes to views brought about by loss of existing, or introduction of new elements into the landscape. These changes can bring about indirect visual effects by blocking previously available views.

7.2.7. These effects can also be beneficial, adverse, or neutral. Sensitivity to adverse effects relates to the receptor (person or group of people affected by the change to the view). People, usually residents, with permanent and uninterrupted views towards the development are the most sensitive. Visitors and tourists who come to the area for its scenic value are also sensitive receptors. People passing through the area have lower sensitivity.

7.3. OPERATIONAL PHASE ASSESSMENT

Landscape Effects: Response to effects upon Landscape Character GUIDANCE.

7.3.1. This section responds to the characteristics identified in Section 5.1.

7.3.2. Key characteristics include:

- Valued semi-natural habitats, including areas of semi-natural grassland and the important linear feature of Grantham Canal.
- Nucleated villages (often within Conservation Areas) constructed of local stone. Well integrated into the landscape with surrounding woodland.
- Remnant areas of ridge and furrow within the intensively farmed landscape.
- Notable views towards Belvoir Castle and the Belvoir escarpment to the south.
- The expansive character of the vale, with the spires of historic churches forming prominent skyline features.
- High levels of tranquillity and strong rural character.

Response to described Key Characteristics

The proposal for a solar PV energy production site will not damage any of the described key characteristics.

The site has a moderate sensitivity to changes to landscape character, is low-lying and well-screened from most of the surrounding area, minimising potential effects upon landscape character (refer Sections 6.5 and 6.6). There are no proposed changes to defined field boundary patterns or hedgerows. The effect of the proposal upon landscape character may slightly alter the perception of a rural arable fields through a change from agricultural crops to solar panels. This could increase the perception of human influence on the landscape. This is localised and hidden from most viewpoints (refer Section 7: Visual Effects)

There is almost no inter-visibility between the site and Belvoir Castle. The exception is the extreme north-west part of the site where the ZTV reveals some slight inter-visibility and from where the castle can be seen just under 5Km from the site boundary at the extreme edge of the study area. It is assessed that this will not have any adverse effect upon the setting of the castle or views from it.

There is an opportunity to enhance other described key characteristics by significantly enhancing the semi-natural habits, especially semi-natural grassland, within the site. These are described in more detail within the accompanying Landscape and Ecology Management Plan (LEMP)

7.3.3. Landscape and Green Infrastructure guidance and opportunities

The following guidance and opportunities to conserve and enhance landscape character and Green Infrastructure should be considered within this Landscape Character Area:

- Retain valued areas of semi-natural habitat which occur amongst the intensively farmed land and create linkages where appropriate. Maximise the use of sustainable agricultural practices that protect and enhance ecological networks.
- Ensure that development does not detract from the setting of historic buildings and settlements. Ensure materials complement the existing vernacular.
- Ensure that development does not detract from or interrupt views to and from the adjacent Belvoir escarpment.
- Avoid siting new development in areas where it would be widely visible within the open character of the vale.
- Retain the valued rural character of the vale and avoid urbanising influences.
- Plan for successful integration of potential new development in the landscape through sensitive design and siting, including use of sensitive materials and use of landscape mitigation to enhance sense of place. Promote better integration of existing settlement edges into the landscape.
- Plant hedgerows, hedgerow trees and small woodlands to improve habitat connectivity and replace those lost to past intensification/development. Ensure existing hedgerows are managed appropriately.
- Improve habitat and access linkages with Grantham Canal (a priority GI enhancement area and SSSI) which forms an important linear GI feature crossing the vale. Seek to improve the biological condition of the canal.
- Establish access routes along the length of the Grantham Canal as some areas are inaccessible. Disused railways within the landscape could be cleared and multi-use trails created to supplement access to the Canal.
- Promote and seek opportunities to enhance the Cross Britain Way and National Cycle Route 15, which cross through the area.

Response to guidance and opportunities to conserve and enhance landscape character

Solar PV sites involve comparatively light-touch management regimes. The change from more intensive agriculture to occasional grassland management regimes, combined with substantial new areas of wildflower rich grasslands and more relaxed hedgerow cutting will significantly enhance the semi-natural habits within the site. This is assessed as having an overall biodiversity net gain and is described in more detail in the accompanying Landscape and Ecological Management Plan (LEMP).

The site is nearly 5Km from Belvoir Castle from where it cannot be seen apart from a minor part of the top of field enclosure A.

The site is not widely visible and views towards the site are hard to find from the surrounding area. Viewpoints from where the site can be seen are identified, described, and assessed in Section 7.9 and in the accompanying Representative Views Report.

There is an opportunity to enhance other described key characteristics by significantly enhancing the semi-natural habits, especially semi-natural grassland, within the site. These are described in more detail within the accompanying Landscape and Ecology Management Plan (LEMP)

A new length of hedgerow is proposed along the south-west section of the site adjacent to the footpath which crosses field enclosure H.

The woodland along the Grantham Canal will have enhanced biodiversity connections with the site through the introduction of new wildflower areas and a more relaxed hedge cutting regime.

Hedgerows and trees will be retained and protected, with existing hedgerows allowed to grow more naturally - enhancing biodiversity and offering improved visual screening from the surrounding area.

There is no inter-visibility between the site and National Cycle Route 15 or the Cross Britain Way.

7.4. ASSESSING SIGNIFICANCE OF EFFECTS ON LANDSCAPE CHARACTER

Assessment of sensitivity of the landscape to change

7.4.1. The criteria used for assessing site sensitivity to both landscape and visual receptors are summarised in the table in Appendix 1.

7.4.2. The sensitivity of the site to accommodate changes to the landscape is assessed in the range:

Very High - High - Medium - Low - Negligible

Assessment of the magnitude of effect upon the landscape

7.4.3. The criteria used for assessing the magnitude of impact is summarised in the table in Appendix 1

7.4.4. The magnitude of change to the landscape is assessed in the range:

Major - Moderate - Minor - Negligible - No Change

Assessment of sensitivity and magnitude combined – Significance of effect

7.4.5. In order to report on the overall significance of the proposal on both landscape and visual receptors the sensitivity of the site and the magnitude of change are assessed in combination. The outcomes are reported using descriptive terms rather than numerical scores and the terms used are summarised in Appendix 1.

7.4.6. The significance of the effect of the proposal upon the landscape is assessed in the range:

Very Large - Large - Moderate - Slight - Neutral

Valency

7.4.7. The outcome can be both positive – i.e. the proposal makes a beneficial change to the landscape; and negative – the proposal will result in an adverse change to landscape character and visual character. Effects are defined as adverse, neutral, or beneficial. Descriptions of these are shown in the table in Appendix 1.

7.5. SENSITIVITY OF THE SITE TO ACCOMMODATE CHANGES TO THE LANDSCAPE

Sensitivity of effects upon landform and scale

7.5.1. Assessment is **Lower to Medium Sensitivity**: “Low or medium importance and rarity, local scale”. “An extensive lowland flat landscape, often a larger scale landform”.

Landform cover pattern and presence of human scale features

7.5.2. Assessment is **Medium Sensitivity**: “Medium importance and rarity, local scale”. “A landscape with large-scale fields, some variety in land cover and occasional human scale features such as trees and domestic buildings”.

Sensitivity of effects upon tracks and transport patterns

7.5.3. Assessment is **Low Sensitivity**: “Low or medium importance and rarity, local scale”. “A landscape containing some existing roads and vehicular tracks, and few restrictions in terms of narrow hedged lanes”.

Sensitivity of effects upon skylines

7.5.4. Assessment is **Medium to Higher Sensitivity**: “High or medium importance and rarity, regional scale, limited potential for substitution”. “A landscape with prominent skylines that may form an important backdrop to views from settlements or important viewpoints and/or with important landscape features”.

Sensitivity of effects upon perceptual qualities

7.5.5. Assessment is **Medium Sensitivity**: “High or medium importance and rarity, regional scale, limited opportunity for substitution”. “A rural landscape with some modern development and human landscape”.

Sensitivity of effects upon historic landscape character

7.5.6. Assessment is **Medium Sensitivity**: “High or medium importance and rarity, regional scale, limited potential for substitution”. “The majority of the landscape covered by medium sensitivity historic landscape types or a mixture of higher and lower historic landscape types”.

Sensitivity of effects upon scenic and special landscape qualities

7.5.7. Assessment is **Medium Sensitivity**: “High or medium importance and rarity, regional scale, limited potential for substitution”. “a landscape which has a medium scenic quality and some of the special qualities may be affected by energy development”.

Summary of landscape sensitivity ratings

7.5.8. The sensitivity of the landscape to accommodate change is summarised below:

<i>Landscape characteristic</i>	<i>Sensitivity</i>	<i>Magnitude of effect</i>	<i>Significance of effect</i>	<i>Comments</i>
Landform and scale	Lower to Medium	Minor	Slight	Effect very localised
Landform cover pattern and presence of human scale features	Medium	Moderate	Moderate	Effect very localised
Tracks/transport patterns	Low	Minor	Slight	Minimal additions compared with baseline
Skylines	Medium to higher	Minor	Slight	Effect very localised
Perceptual Qualities	Medium	Moderate	Moderate	Effect very localised
Historic landscape character	Medium	Moderate	Moderate	No adverse effects assessed
Scenic and special qualities	Medium	Moderate	Moderate	Effect very localised

7.6. SIGNIFICANCE OF EFFECTS UPON CHANGES TO THE LANDSCAPE

7.6.1. The effect of solar energy production upon the range of landscape characteristics described in Section 7.5 are summarised as Moderate to Slight: “These beneficial or adverse effects are important but are not likely to be key decision-making factors. The cumulative effects

of such issues may become a decision- making issue if leading to an increase in the overall adverse effect on a particular resource or receptor”.

7.6.2. The outcome of this assessment will inform site mitigation measures which are covered in Section 7.14.

7.7. VISUAL EFFECTS

Assessment of Visual Sensitivity and Magnitude

7.7.1. This section describes the effect of the proposal upon selected viewpoints. Priority is given to viewpoints with public access such as public rights of way, roads and residential dwellings which would be unacceptably harmed by views of the proposed development.

7.7.2. Representative viewpoints for the assessment of visual effects have been identified in the baseline assessment. These are at publicly accessible locations such as roads and public rights of way and public open space. The sensitivity of receptor, magnitude of change to the view, and the significance of the impact on the receptor are assessed for each representative viewpoint.

7.7.3. For private dwellings assessment is made a ground level. In reality, views may be apparent from first floor windows or further upper floors. These have not been assessed.

Visibility generally

The visual envelope is described in Section 6.6.

Selection of representative viewpoints

7.7.4. To test the ZTV model and to identify individual viewpoints not immediately apparent for the computer model, a visual tour within the area was carried out. The selection of viewpoints favoured visual receptors with higher sensitivity to the development. In particular residential properties, designated public footpaths, popular tourist areas and areas noted for their quietness and remoteness.

7.7.5. It was not possible to assess the effect of the proposal from individual properties.

7.8. MAGNITUDE AND SIGNIFICANCE FROM VISUAL RECEPTORS

7.8.1. The significance of effect is a combination of receptor sensitivity and magnitude of the visual effect. For example, a view experienced by residents (high sensitivity) with a minor magnitude of effect gives rise to a slight or moderate effect. The same view experienced by the travelling public (low sensitivity) produces a slight or neutral effect. The greatest effects are experienced by residents observing a major magnitude of change to the view.

7.8.2. The effect of the construction phase (CP in the table) will give rise to more adverse assessments than the operational phase. This is because of the presence of an unsightly construction infrastructure. The duration of the construction phase is assumed to be a few months and these adverse effects will be temporary. After the construction is complete, the significance of the visual effect reduces as the project enters the operational phase.

7.9. SIGNIFICANCE OF RESIDUAL VISUAL EFFECTS OF THE DEVELOPMENT PROPOSAL UPON VISUAL RECEPTORS

7.9.1. Reference should be made to the assessment tables in the Appendices for detailed descriptions of the range of visual effects.

14 viewpoints were assessed from within the study area. These cover views from all directions. The site cannot be seen from any viewpoints to the east.

Very Large

7.9.2. There are no visual receptors which will experience a very large effect upon views.

Large

7.9.3. There are no visual receptors which will experience a large effect upon views.

Moderate

7.9.4. **Four visual receptors are assessed as experiencing a moderate and adverse effect upon views.** All are located at the southern end of the site in close proximity to the solar arrays. The effect upon one of these viewpoints will reduce to a residual effect of slightly adverse post mitigation establishment. Three viewpoints will remain adverse with mitigation slightly reducing the effect but remaining adverse for the lifetime of the installation.

7.9.5. Viewpoints 10, 11 and 12 are all taken from the public footpath which runs towards the site in the south-west sector, before it forms a new boundary with the site adjacent to Field enclosure H. From Viewpoints 10 and 11 the site is clearly visible on low lying flat ground below the hillside and with long distant panoramic views to the west. **Mitigation is recommended to reduce this effect in the form of a new hedgerow management which will allow the boundary hedgerows to grow. This will have some effect in reducing adverse effects, but the solar arrays will remain visible from this viewpoint.**

7.9.6. Viewpoint 12 is taken from a length of footpath which borders the site at its extreme south-western boundary. This viewpoint has the most direct views across the site with views towards the front, south facing, panels of the solar arrays. From this viewpoint the solar arrays will be obvious and will occupy a significant part of the view, especially during winter months. **Mitigation is recommended to reduce this effect in the form of a new hedgerow planted between the footpath and the solar arrays. This will have some effect in reducing adverse effects, but the solar arrays will remain visible from this viewpoint.**

7.9.7. Viewpoint 13 is taken from a bridge which crosses the Grantham Canal along a public footpath between Barkestone-le-Vale and Granby. From here the angle of view is reduced, such that the host fields appear oblique and occupy a relatively smaller proportion of the wider view. **Mitigation is recommended to reduce this effect in the form of a new hedgerow management which will allow the boundary hedgerows to grow. This will have some effect in reducing adverse effects, but the solar arrays will remain visible from this viewpoint, especially in winter.**

Slight

7.9.8. Three viewpoints were assessed as experiencing a slight and slightly adverse effect upon views.

7.9.9. Viewpoints 4 and 5 show representative views from west-facing houses along Sutton Lane, Sutton. From here the site lies approximately 1.4-1.7Km distant and the views will be glimpses across a succession of boundary hedgerows and through mature trees towards the side elevations of the panels. Views will be substantially screened in summer, and more open during the winter months. **Mitigation is recommended to reduce this effect in the form of a new hedgerow management which will allow the boundary hedgerows to grow. This will have a beneficial effect in reducing assessed adverse effects and will rapidly reduce the residual effect to not adverse.**

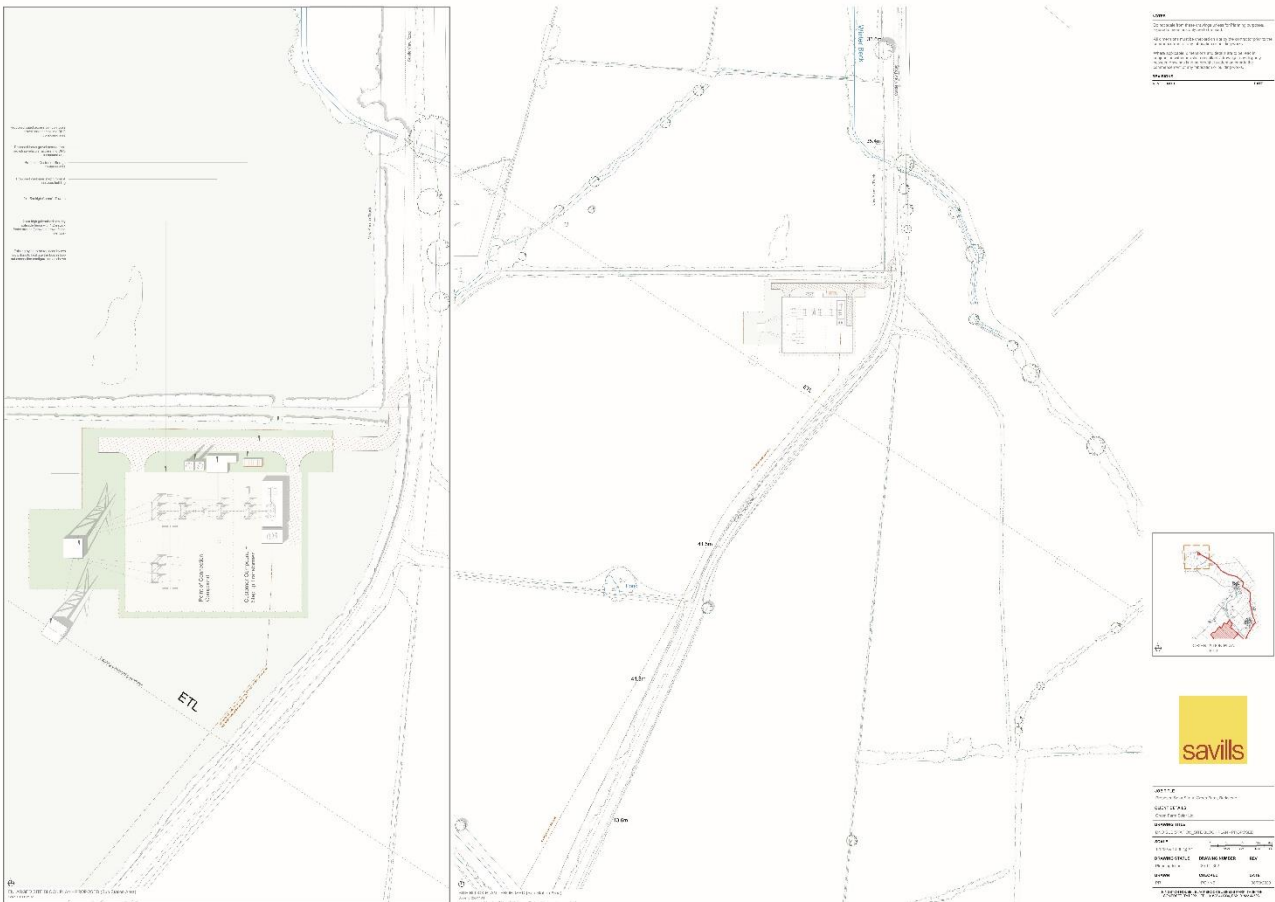
7.9.10. Viewpoint 9 is taken from the same public footpath assessed as Viewpoints 10 and 11, but from higher ground close to Jericho Barn and Covert. The site will be visible as an oblique view on low lying flat ground below Barkestone-le-Vale and with long distant panoramic views to the west. **Mitigation is recommended to reduce this effect in the form of a new hedgerow management which will allow the boundary hedgerows to grow. This will have some effect in reducing adverse effects, but the solar arrays will remain visible from this viewpoint.**

Neutral

7.9.11. All of the remaining seven viewpoints are assessed as experiencing a neutral effect. This either means no change to the view, or a negligible effect which, because of distance from the site, will be barely perceptible.

7.10. VISUAL EFFECT OF THE GRID YARD

7.10.1. The grid yard is located approximately 3.6Km north-east of the site



A separate ZTV has been generated to show a theoretical visibility envelope to and from the grid yard. The site is adjacent to Castle View Road and will be visible from a single dwelling at California. Otherwise, the site is isolated and distant from residential properties.

The immediate proximity of large pylons within the filed means that this kind of structure will not be a wholly new addition to the view and will read as additional ancillary elements. **The assessment is slight and not adverse.**

7.10.2. The effect upon road users is assessed a slight and not adverse.

7.10.3. The adverse effects can be mitigated at low level by allowing existing boundary hedges along the northern and eastern boundaries to grow higher.

7.11. VISUAL EFFECTS OF THE DEVELOPMENT PROPOSAL UPON VISUAL RECEPTORS DURING THE CONSTRUCTION PHASE

7.11.1. Those receptors experiencing an adverse effect upon views will experience a moderately adverse effect during the construction phase. Adverse effects are the result of construction site traffic and infrastructure, including noise. Solar energy sites are short duration installations and the adoption of considerate construction methods and protocols can reduce any temporary adverse effects.

7.11.2. Post construction phase, there will be a period of moderate and adverse effects while mitigation planting establishes. The screening effect should develop within 5 years and the landscape proposals show some larger advanced nursery stock plants to speed establishment and screening within this 5-year period.

7.12. VISUAL IMPACT SCHEDULE - REPRESENTATIVE VIEWPOINTS

7.12.1. The assessment of individual viewpoints is produced in tabulated form in the accompanying illustrated report and describes each Representative View.

7.12.2. Each table assesses:

- Distance to the development
- Type of receptors
- Sensitivity of the receptor
- Significance of the effect
- A description of the view and the extent of representation
- The magnitude of the effect on the view and its valency (Adverse, Beneficial, Neutral)
- The significance of the effect on the view and its valency (Adverse, Beneficial, Neutral)
- Action required to mitigate against adverse effects, including design development.
- The significance of the effect on the view and its valency (Adverse, Beneficial, Neutral) - post design development/successful mitigation.

7.13. OUTCOMES OF LANDSCAPE AND VISUAL IMPACT ASSESSMENT INFLUENCING DESIGN DEVELOPMENT AND MITIGATION

RESPONSE TO LANDSCAPE AND VISUAL CHARACTER ASSESSMENT AND APPLICATION OF GOOD PRACTICE GUIDANCE ON SITING SOLAR PV DEVELOPMENTS TO THIS SITE

7.13.1. The following provides a response to the landscape character assessment by reference to national guidance on siting solar PV development - focussing on minimising landscape and visual effects. It is recognised that technologies need to be sited and designed to ensure a reasonable output.

- i. The site is located on flat land, rather than undulating land or on upper slopes. This minimises potential effects upon landscape character.
- ii. The site is located within a landscape with a substantial sense of enclosure rather than in open and unenclosed landscapes. However, some of the hedges are currently low and should be allowed to grow to enhance biodiversity and improve visual screening from the surrounding area.
- iii. Views from local viewpoints, popular routes, recognised /iconic views are extremely limited and restricted to sequential views from one public footpath and a single view a bridge which crosses the Grantham Canal. From the canal bridge some panels will be sited in areas where they can be well concealed or integrated into sensitive views, while others will be more visible.
- iv. Viewpoint assessment has considered the appearance of the development as viewed from the 'backs' and 'sides' (where frames will be more visible) as well as from the 'front'.
- v. The site does not span across marked changes in character on the ground.
- vi. The site is not located in an area valued for its remoteness, or in an area free from human influence and perceived as 'untamed' naturalness.
- vii. The proposal provides enhanced management of landscape features, and habitats as part of the development. This includes contributing to wider landscape scale targets and projects in LPA's Biodiversity Action Plans, guidelines in Landscape Character Assessments, and landscape management objectives set out in local landscape character assessments.

7.14. RECOMMENDED MITIGATION MEASURES TO REDUCE ASSESSED ADVERSE EFFECTS

7.14.1. Seven viewpoints were assessed with mitigation requirements. Of these, four require mitigation to reduce moderate and adverse effects. The remaining 3 were assessed as receiving a slight and slightly adverse effect. The effect upon all receptors will reduce to slightly adverse, or not adverse, post mitigation establishment.

7.14.2. The two viewpoints which require new planting, in the form of hedge and tree planting, to reduce moderate and adverse effects are:

- Views from the public footpath which runs close to, and along the boundary, south-west of the site. **A new hedgerow is proposed between the footpath and the solar arrays.**
- Views from a bridge which crosses the Grantham Canal south-east of the site. **The existing field boundary hedgerows should be allowed to grow to 3m height.**

7.14.3. Any further residual adverse effects assessed as not adverse, but still with potential for views towards the panels, including effects upon visual receptors at the grid yard location, can be further reduced, in a comparatively short timescale, by allowing existing field boundary

hedgerows to grow to a height which screens the solar arrays without interfering with the effectiveness of energy production.

7.14.4. These mitigation measures as described, in detail, in the accompanying Landscape and Ecological Management Plan (LEMP).

8. CONCLUSIONS

8.1.1. The assessment has revealed the following conclusions and includes recommendations to reduce adverse effects described in this report:

8.2. EFFECTS UPON LANDSCAPE CHARACTER

8.2.1. The site has a moderate sensitivity to solar farm development: "These beneficial or adverse effects are important but are not likely to be key decision-making factors. The cumulative effects of such issues may become a decision-making issue if leading to an increase in the overall adverse effect on a particular resource or receptor". This is a low-lying, flat site containing few special landscape features.

8.2.2. The site is located on low-lying flat land. At a national and regional scale, this type of site is favoured for solar energy production over undulating of higher ground as the effects upon landscape character and visual receptors are greatly reduced.

8.2.3. The proposal is to install solar arrays within the existing hedged field boundaries. No hedgerows are to be removed such that the pattern of landscape remains as the baseline condition, and as described in landscape character areas descriptions.

8.2.4. At a local level, the landscape character is rural and tranquil with the surrounding countryside free from any significant modern development. However, while the proposal will bring a new modern addition to the site it will not affect the field patterns or vegetation character of the area. The site has no landscape designations.

8.2.5. On balance, the significance of the effect upon landscape character is assessed as slight rather than neutral. This is principally due to the addition of new human scale features.

8.2.6. Described landscape characteristics, especially those listed in landscape management guidelines, will be enhanced by changing intense agricultural practice into a less-intense, nature-led, approach to landscape management. This will have benefits upon local biodiversity, as well as, reducing any residual visual effects.

8.3. EFFECTS UPON VISUAL RECEPTORS

8.3.1. The effect upon visual receptors is assessed in the range moderate to negligible. No assessments of very large or large effects were recorded.

8.3.2. The site lies on low lying land in a comparatively wide-open landscape, with views towards the site hard to find from most directions.

8.3.3. The exception are views from the immediate south and south-west where the site is visible from a public footpath which runs close to, and along, the southern boundary of the site. The magnitude of effect from these viewpoints is assessed as moderate and adverse and experienced by medium sensitivity visual receptors (footpath users). However, the small number of receptors gives rise to an overall assessment of moderate to slight and triggers a recommendation of some mitigation measures to reduce adverse effects.

8.3.4. These mitigation measures will not fully screen the proposal and the residual effect, following the construction phase, will remain moderate to slight and adverse from these viewpoints. It is important to note that these effects are upon the land cover within the field enclosures themselves, rather than any changes to landscape pattern or wider views which will remain unchanged. It is principally a visual change from one material (agricultural crops) to another (solar arrays), but with a potential change to perceptions of the landscape view based upon an individual's response to this type of landscape change.

8.3.5. Glimpse views across a succession of hedgerows and through existing boundary vegetation are possible from dwellings and footpaths at Sutton Lane, Sutton. These views are between 1.4-1.7Km from the site boundary and form a small part of the overall view.

8.3.6. From all other assessed viewpoints the effect will be negligible or visual receptors will experience no change to the view.

8.4. SUMMARY CONCLUSION

8.4.1. On balance, through a detailed landscape and visual assessment, this is assessed as a good site for solar energy production. It is not without qualification.

8.4.2. The site has a moderate sensitivity to solar energy production and there are no assessed adverse effects upon landscape character. The proposal provides an opportunity to improve the described landscape character, in the medium and long-term, through changing landscape management regimes which will increase biodiversity as well as enhancing the tree and hedgerow cover in this flat and relatively intensively farmed landscape.

8.4.3. The main direct views towards the site, which will experience moderate to slight and adverse effects prior to mitigation are from a footpath which runs close to, and adjacent to, the south-west sector of the site (especially field enclosure H). These views can be mitigated, but not screened completely. Once mitigation planting has established, within 5 years the residual effect is likely to be moderate and slightly adverse. Beyond 10 years, the effect will become slight and not adverse. In addition to mitigation screening, it may be possible, in the short term, to enhance views from these properties through careful landscape master planning. This is shown within the accompanying Landscape and Ecological Management Plan (LEMP).

8.4.4. From public roads and all other footpaths within the ZTV, the visual effect is slight, or negligible. In all cases, any assessed adverse effects at the construction phase will experience a reduced residual effect quickly as hedgerows are allowed to establish and mitigation planting establishes.

8.4.5. The remaining assessed viewpoints will experience a neutral effect - no change to the view, or a negligible change which is not assessed as significant and which is not adverse.

9. APPENDIX 1 - ASSESSMENT CRITERIA TABLES

9.1. SENSITIVITY VALUES

9.1.1. Measures of sensitivity are described more fully in this report, but follow the general principles outlined in the table below:

Value/Sensitivity	
Value (Sensitivity)	Typical Descriptors
Very High	Very high importance and rarity, international scale, and limited potential for substitution
High	High importance and rarity, national scale, and limited potential for substitution
Medium	High or medium importance and rarity, regional scale, limited potential for substitution
Low (or Lower)	Low or medium importance and rarity, local scale
Negligible	Very low importance and rarity, local scale

9.2. ASSESSMENT OF MAGNITUDE EFFECT ON LANDSCAPE CHARACTER

9.2.1. The criteria used for assessing the magnitude of impact is summarised in the table below:

Magnitude of effect upon Landscape Character	
Magnitude of impact	Typical Criteria Descriptors
Major	Loss of resource and/or quality and integrity: severe damage to key characteristics, features, or elements (Adverse) Large scale or major improvement of resource quality: extensive restoration or enhancement: major improvement of attribute quality (Beneficial)
Moderate	Loss of resource, but not adversely affecting integrity: Partial loss of/damage to key characteristics, features, or elements (Adverse)

	Benefit to, or addition of, key characteristics, features, or elements: improvement of attribute quality (Beneficial)
Minor	Some measurable change in attribute's quality or vulnerability: minor loss of, or alteration to, one (or maybe more) key characteristics, features, or elements (Adverse) Minor benefit to, or addition of, on (or maybe more) key characteristics, features, or elements: some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial)
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features, or elements (Adverse) Very minor benefit to or positive addition of one or more characteristics, features, or elements (Beneficial)
No change	No loss or alteration to characteristics, features, or elements: no observable impact in either direction

9.3. SENSITIVITY AND MAGNITUDE COMBINED - SIGNIFICANCE OF EFFECT

9.3.1. In order to report on the overall significance of the proposal on both landscape and visual receptors the sensitivity of the site and the magnitude of change are assessed in combination. The outcome can be both positive - i.e. the proposal makes a positive change to the landscape; and negative - the proposal will result in a negative change to landscape character and visual character. The outcomes are reported using descriptive terms rather than numerical scores and the terms used are summarised below:

Significance of Effect	
Significance of Category	Typical descriptors of Effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national, or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process

Moderate	These beneficial or adverse effects may be important but are not likely to be key decision-making factors. The cumulative effects of such issues may become a decision-making issue if leading to an increase in the overall adverse effect on a particular resource or receptor
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error

9.4. VALENCY OF EFFECT - LANDSCAPE AND VISUAL ASSESSMENT

9.4.1. Effects are defined as adverse, neutral, or beneficial.

Valency of Effect	
Nature of Effect	Definition
Adverse	Effect that would result in damage to the condition, integrity or key characteristics of the landscape or visual resource
Neutral/ Not adverse	Effect that would maintain, on balance, the existing level of condition, integrity or key characteristics of the landscape or visual resource. Whilst the nature of the change may be significant, the proposal does not compromise the inherent qualities of the resource and can incorporate a combination of positive and negative effects.
Beneficial	Effect that would result in improvement to the condition, integrity or key characteristics of the landscape or visual resource

9.5. LANDSCAPE CHARACTER SENSITIVITY

Landform and scale				
A smooth, convex or flat landform is likely to be less sensitive to development than a landscape with a dramatic rugged landform, distinct landform features (including prominent headlands and cliffs) or pronounced undulations; and larger scale landforms are likely to be less sensitive than smaller scale landforms - because solar farms may appear out of scale, detract from visually important landforms or appear confusing in the latter types of landscapes.				
Examples of sensitivity ratings				
Lower sensitivity		←————→	Higher sensitivity	
e.g. an extensive lowland flat landscape or elevated plateau, often a larger scale landform	e.g. a simple gently rolling landscape, likely to be a medium-large scale landform	e.g. an undulating landscape, perhaps also incised by valleys, likely to be a medium scale landform	e.g. a landscape with distinct landform features, and/or irregular in topographic appearance (which may be large in scale), or a smaller scale landform	e.g. a landscape with a rugged landform or dramatic landform features (which may be large in scale), or a small scale landform

Landform cover pattern and presence of human scale features				
Simple, regular landscapes with extensive areas of consistent ground cover are likely to be less sensitive to development than landscapes with more complex or irregular land cover patterns, smaller and/ or irregular field sizes and landscapes with frequent human scale features that are traditional of the landscape, such as stone farmsteads and small farm woodlands 18. This is because large features may dominate smaller scale traditional features within the landscape.				
Examples of sensitivity ratings				
Lower sensitivity		←————→	Higher sensitivity	
e.g. a very large-scale landscape with uniform groundcover and lacking in human scale features	e.g. a landscape with large-scale fields, little variety in land cover and occasional human scale features such as trees and domestic buildings	e.g. a landscape with medium sized fields, some variations in land cover and presence of human scale features such as trees, domestic buildings	e.g. a landscape with irregular small-scale fields, variety in land cover and presence of human scale features such as trees, domestic buildings	e.g. a landscape with a strong variety in land cover and small scale/irregular in appearance containing numerous human scale features

Tracks/transport pattern				
Landscapes that are devoid of tracks will be particularly sensitive to development because it will be more difficult to absorb permanent new tracks into the landscape without change to character in these areas. In addition, if an LCA has a rural road network which contributes to landscape character (e.g. winding narrow lanes bounded by high hedge banks or sunken lanes), this aspect of character may be affected by access works to enable HGVs carrying development materials to a site. This characteristic therefore also influences sensitivity.				
Examples of sensitivity ratings				
Lower sensitivity		←————→	Higher sensitivity	
e.g. a landscape containing existing roads and vehicular tracks, and no restrictions in terms of narrow hedged lanes	e.g. a landscape containing existing roads and vehicular tracks, and few restrictions in terms of narrow hedged lanes	e.g. a landscape containing some existing roads and vehicular tracks, including some restrictions in terms of narrow hedged lanes	e.g. a landscape containing few lanes or vehicular tracks, and these are predominantly narrow lanes bounded by high hedge banks	e.g. a landscape devoid of roads or vehicular tracks

Skylines				
Prominent and distinctive and/or undeveloped skylines, or skylines with important landmark features, are likely to be more sensitive to development because development may detract from these skylines as features in the landscape or draw attention away from existing landform or landmark features on skylines. These include the skylines of elevated coastlines and coastal headlands. Important landmark features on the skyline might include historic features or monuments.				
Examples of sensitivity ratings				
Lower sensitivity		←————→	Higher sensitivity	
e.g. a large scale flat or plateau landscape where skylines are not prominent and/or there are no important landmark features on the skyline	e.g. a large scale landscape where skylines are not prominent and/or there are very few landmark features on the skyline - other skylines in adjacent LCAs are more prominent	e.g. a landscape with some prominent skylines, but these are not particularly distinctive. There may be some landmark features on the skyline.	e.g. a landscape with prominent skylines that may form an important backdrop to views from settlements or important viewpoints, and/or with important landmark features	e.g. a landscape comprising prominent or distinctive undeveloped skylines or skylines with particularly important landmark features

Perceptual qualities

Landscapes that are relatively remote or tranquil (due to freedom from human activity and disturbance and having a perceived naturalness or a strong feel of traditional rurality with few modern human influences) tend to increase levels of sensitivity to development compared to landscapes that contain signs of modern development (as the development will introduce new and uncharacteristic features which may detract from a sense of tranquillity and or remoteness/ naturalness).

Examples of sensitivity ratings

Lower sensitivity		←————→			Higher sensitivity
e.g. a landscape with much human activity and development such as industrial areas or a port	e.g. a rural landscape with much human activity and dispersed modern development	e.g. a rural landscape with some modern development and human activity	e.g. a more naturalistic landscape and / or one with little modern human influence and development	e.g. a remote or 'wild' landscape with little or no signs of current human activity and development	

Historic Landscape Character

Landscapes comprising prehistoric and medieval enclosures (including strip fields) are considered to have a higher sensitivity to development than landscapes comprising modern enclosures or industrial/military Historic Landscape Types (HLTs) due to the potential effects of development on the coherence of these landscapes (including effects of access tracks on field boundaries) and the ability to appreciate them. Historic landscape types such as rough ground, ancient woodland, other woodland, marsh, dunes, mud, sand, outcrop/ scree/ cliffs, water meadows, and orchards also have a higher sensitivity to energy development as a result of potential change to the coherence of these historic landscape types.

Examples of sensitivity ratings

Lower sensitivity		←————→			Higher sensitivity
e.g. majority of the landscape covered by least sensitive HLTs	e.g. majority of the landscape covered by lower sensitivity HLTs, but may include some small areas of higher sensitivity	e.g. majority of the landscape covered by medium sensitivity HLTs or a mixture of higher and lower sensitivity HLTs	e.g. majority of the landscape covered by higher sensitivity HLTs, but may include some small areas of lower sensitivity	e.g. the majority of the landscape covered by higher sensitivity HLTs	

Scenic and Special Qualities				
Landscapes that have a high natural beauty/ scenic quality (which may be recognised as a National Park, Heritage Coast or AONB) and whose scenic qualities, special qualities (as recorded in the LCA or by AGLV designation) or natural beauty are likely to be affected by development will be more sensitive than landscapes of low scenic quality or whose special scenic qualities or special qualities are not likely to be affected by wind energy development (some areas may include special qualities that might not be affected by development). Scenic and special qualities may relate to landscapes that are not designated as well as landscape designated for their natural beauty.				
Examples of sensitivity ratings				
Lower sensitivity		←————→	Higher sensitivity	
e.g. landscape has low scenic quality such as an industrial area or despoiled land - special qualities will not be affected by energy development	e.g. landscape has low-medium scenic quality, or special qualities are unlikely to be affected by energy development	e.g. landscape has a medium scenic quality and some of the special qualities may be affected by energy development	e.g. landscape has a medium-high scenic quality - most of the special qualities are likely to be affected by energy development	e.g. area has a high scenic quality (likely to be recognised as National Park/AONB/ Heritage Coast) and the scenic qualities will be affected by energy development

9.6. SENSITIVITY OF VISUAL RECEPTORS

9.6.1. The sensitivity of visual receptors - general principles

- the location i.e. proximity and context of the viewpoint.
- the expectations and occupation or activity of the receptor, including awareness of their surroundings and duration of viewing opportunity, whether prolonged or intermittent.
- the importance of the view, which may be determined with respect to its popularity or numbers of people affected, its appearance in guidebooks, on tourist maps, and in the facilities provided for its enjoyment and references to it in literature or art.

9.6.2. A wide variety of visual receptors can reasonably be anticipated to be affected by a proposed development. The range of visual receptors will include pedestrians, and recreational users of the surrounding landscape such as walkers, cyclists and those otherwise engaged in the pursuit of leisure activities within the visual envelope of the site, local residents, motorists, those working outdoors and other workers. All categories of receptors can potentially be affected to a greater or lesser degree by a development. The four main visual receptor groups are considered in more detail below under the headings of residents, workers, the travelling public, and visitors.

Residents

9.6.3. Local residents tend to have a higher level of sensitivity to changes in their landscape and visual environment than those passing through. For residents, the most important views are those from their homes, although they will also be sensitive to other views such as those

experienced when travelling to work or other local destinations. However, it is these latter views, from public areas nearby houses that are of relevance to the main body of the visual impact assessment (assessment of effects from the representative viewpoints).

Workers

9.6.4. Workers are generally less sensitive to effects as they are focussed on the tasks they are carrying out. Indoor workers generally have a Low sensitivity, and outdoor workers, such as farmers and those offering outdoor pursuits are considered to have a Low to Medium sensitivity.

The Travelling Public

9.6.5. This category of visual receptor group overlaps to a degree with the other categories in that it embraces local residents, workers and those who come to visit the area. This group of visual receptors will include the following:

9.6.6. Motorists - For major trunk routes and motorways, the sensitivity of users will be Low, as they will be travelling at speed and will be primarily focussed on achieving their destination. Users of other A-roads will have a Low to Medium sensitivity, unless these are particularly scenic or slow routes, in which case the sensitivity may be assessed as Medium. The users of local roads will have a Medium sensitivity.

9.6.7. Cyclists and footpath users - These groups are addressed under the heading of visitors as they are generally less concerned with the object of reaching their destination than with the enjoyment of being outside and enjoying the landscape and available views.

Visitors

9.6.8. This category includes several visual receptor groups, each with different objectives and levels of sensitivity to any change in the fabric or character of the landscape and views arising from the proposed development. This group includes those who are mainly concerned with enjoyment of the outdoor environment but also those who may pursue indoor recreational pursuits and is anticipated to include the following (arranged in decreasing sensitivity):

- Those whose main preoccupation is the enjoyment of scenery (High sensitivity).
- Recreational walkers and equestrians (High sensitivity)
- Those visitors engaged in cultural pursuits (High-Medium sensitivity)
- Cyclists (High-Medium sensitivity)

9.7. MAGNITUDE OF EFFECT ON VIEWS FROM REPRESENTATIVE VIEWPOINTS

9.7.1. Magnitude of effect identifies the degree of change to the character and quality of views experienced by the visual receptor. This will be influenced by:

9.7.2. the distance of the viewpoint from the proposed development and the scale of change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development.

9.7.3. the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour, and texture.

Magnitude of Effect on Views	
High	Total or major alteration to key elements, features, or characteristics of the view, such that post development the baseline situation will be fundamentally changed.
Medium	Partial alteration to key elements, features, or characteristics of the view, such that post development the baseline situation will be noticeably changed.
Low	Minor alteration to key elements, features, or characteristics of the view, such that post development the baseline situation will be largely unchanged despite discernible differences.
Negligible	Very minor alteration to key elements, features, or characteristics of the view, such that post development the baseline situation will be fundamentally unchanged with barely perceptible differences.

9.8. TABLE SHOWING THE SIGNIFICANCE OF EFFECT AS A COMBINATION OF MAGNITUDE AND RECEPTOR SENSITIVITY

		MAGNITUDE OF CHANGE				
		Major	Moderate	Minor	Negligible	No Change
RECEPTOR SENSITIVITY	Very High	Very Large	Large or Very Large	Moderate or Large	Slight	Neutral
	High	Large or Very Large	Moderate or Large	Slight or Moderate	Slight	Neutral
	Medium	Moderate or Large	Moderate	Slight	Neutral or Slight	Neutral
	Low	Slight or Moderate	Slight	Neutral or Slight	Neutral or Slight	Neutral
	Negligible	Slight	Neutral or Slight	Neutral or Slight	Neutral	Neutral

10. APPENDIX 2 - GLOSSARY

- **Cumulative effects** - The summation of effects that result from changes caused by a development in conjunction with other past, present, or reasonably foreseeable actions.
- **Indirect effects** - Effects on the environment, which are not a direct result of the development but are often produced away from it or as a result of a complex pathway. Sometimes referred to as secondary impacts.
- **Landscape character type** - A landscape type will have broadly similar patterns of geology, landform, soils, vegetation, land use, settlement, and field pattern discernible in maps and field survey records.
- **Landscape effects** - Change in the elements, characteristics, character, and qualities of the landscape as a result of development. These effects can be negative or positive.
- **Landscape character** - means the distinct and recognisable pattern of elements that occur consistently in a particular type of landscape, and how these are perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.
- **Landscape quality (or condition)** - is based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.
- **Landscape value** - is concerned with the relative value that is attached to different landscapes. In a policy context, the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by communities for many different reasons without any formal designation.
- **Landscape sensitivity** - The extent to which a landscape can accept change of a particular type and scale without material effects on its character.
- **Magnitude** - A combination of the scale, extent, and duration of an effect.
- **Mitigation** - Measures, including any process, activity, or design to avoid, reduce, remedy, or compensate for adverse landscape and visual effects of a development project.
- **Receptor** - Physical landscape resource, special interest or viewer group that will experience an effect.
- **Visual amenity** - The value of a particular area or view in terms of what is seen.
- **Visual effect** - Change in the appearance of the landscape as a result of development. This can be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction).
- **Visual envelope** - Extent of potential visibility to or from a specific area or feature.
- **Zone of Theoretical Visibility (ZTV)** - A computer generated model, based upon bare earth terrain data, which shows areas from where a theoretical visual connection to and from the site is possible.
- **Zone of visual influence** - Area within which a proposed development may have an influence or effect on visual amenity.

11. APPENDIX 3 - REFERENCES

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