

# LANDSCAPE AND VISUAL 10

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## INTRODUCTION

10.1 This chapter of the ES assesses the potential landscape and visual effects arising from the proposed development (refer to Chapter 3 above). The chapter is divided into the following sections:

- Scope and definitions;
- Methodology;
- Landscape planning context;
- Summary of the development proposal, as relevant to this topic;
- Landscape effects;
- Visual effects; and
- Conclusion.

## SCOPE AND DEFINITIONS

10.2 Paragraph 1.1 of the Guidelines for Landscape and Visual Impact Assessment (3rd Edition), published by Landscape Institute and Institute of Environmental Management and Assessment (hereafter referred to as “GLVIA 3”) states that *“Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and on people’s views and visual amenity”*.

10.3 Paragraph 5.1 of GLVIA3 describes how landscape effects are concerned with *“how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character”*.

10.4 Allied to this, paragraph 6.1 of GLVIA3 describes how visual effects are concerned with *“assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements”*.

10.5 Thus, this assessment deals separately with each of these effects, although where relevant and appropriate, cross references may be made to the same features or elements where they are relevant to both.

## METHODOLOGY

10.6 The main source of guidance for this chapter of the ES has been GLVIA3 (*op cit*). Table 3.1 of GLVIA3 summarises the main components of the impact assessment process, with Figure 3.1 in GLVIA3 illustrating the process. For ease of reference, the core components of LVIA identified in GLVIA3 are reproduced in Table 10-1 below.

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**Table 10-1**  
**Core Components of LVIA (taken from GLVIA3)**

Component of EIA Process	Brief description of action in this part of the process
<b>Project description / specification</b>	Provides a description of the proposed development for the purpose of the assessment, identifying the main features of the proposals and establishing parameters such as maximum extent of the development or sizes of the elements. Normally includes description of any alternatives considered.
<b>Baseline Studies</b>	Establishes the existing nature of the landscape and visual environment in the study area, including any relevant changes likely to occur independently of the development proposals. Includes information on the value attached to the different environmental resources.
<b>Identification and description of effects</b>	Systematically identifies and describes the effects that are likely to occur, including whether they are adverse or beneficial.
<b>Assessing the significance of effects</b>	Systematically and transparently assess the likely significance of effects identified.
<b>Mitigation</b>	Makes proposals for measures designed to avoid/prevent, reduce or offset (or compensate for) any significant negative (adverse) effect.

- 10.7 Paragraph 3.23 of GLVIA3 describes how *“The EIA Directive and UK Regulations refer to projects likely to have significant effects on the environment. This means that identifying and describing the effects of a project is not enough in itself. They must also be assessed for their significance. This is a key part of the LVIA process and is an evidence-based process combined with professional judgement. It is important that the basis of such judgements is transparent and understandable, so that the underlying assumptions and reasoning can be understood by others.”*
- 10.8 Figure 3.5 of GLVIA3 illustrates the step-by-step process for assessing the significance of effects based on the combination of the nature of the receptor likely to be affected (sensitivity) and the nature of effect likely to occur (magnitude).
- 10.9 As described in paragraph 3.26 of GLVIA3, assessment of sensitivity will incorporate judgements about the:
- *Susceptibility of the receptor to the type of change arising from the specific proposal; and*
  - *The value attached to the receptor.*
- 10.10 As described in paragraph 3.26 of GLVIA3, assessment of magnitude will incorporate judgements about the:

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- *The size and scale of the effect – for example whether there is a complete loss of a particular element of the landscape or a minor change;*
  - *The geographical extent of the area that will be affected; and*
  - *The duration of the effect and its reversibility.*
- 10.11 The criteria used for assessing sensitivity and magnitude of landscape and visual effects in this assessment (including cumulative aspects and the nature of effect) are set out in Appendix 10/1 to this chapter.
- 10.12 Paragraph 3.28 of GLVIA3, then describes how the separate judgements on the individual criteria of sensitivity and magnitude should be combined to provide an overall judgement of significance.
- 10.13 In addition to the detailed and narrative text describing how the overall judgements of significance have been determined, this assessment also uses the matrix shown in Table 10-2 below.
- 10.14 Both Major effects and Moderate/Major effects are regarded as “*significant*” in the context of the EIA Regulations (refer to Chapter 1 above). This process is not a quantitative process; there is not an absolute scoring system. Instead, the correlation of the two factors, although reflecting recognised features and methods of working outlined in this section, is in the end a matter of professional judgement of the qualified landscape architect.

**Table 10-2**  
**Summary of Combinations for Judging Significance of Landscape and Visual Effects**

Sensitivity / Magnitude	Negligible	Low	Medium	High
Negligible	Negligible Effect	Negligible / Slight Effect	Slight Effect	Slight / Moderate Effect
Low	Negligible / Slight Effect	Slight Effect	Slight / Moderate Effect	Moderate Effect
Medium	Slight Effect	Slight / Moderate Effect	Moderate Effect	<b>Moderate / Major Effect</b>
High	Slight / Moderate Effect	Moderate Effect	<b>Moderate / Major Effect</b>	<b>Major Effect</b>

Note: **Bold** denotes a significant effect

- 10.15 The nature of the change resulting from the proposed development may also be described as beneficial (i.e. providing enhancement or improvement to the landscape), adverse (i.e. resulting in losses of characteristic elements or degradation/fragmentation of the landscape resource), or neutral (i.e. effects are neither adverse nor beneficial, or impacts may be balanced between adverse and beneficial).

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- 10.16 Initially a desktop study was undertaken to review the relevant publications, maps and plans relating to the proposed development. This was followed by fieldwork to various parts of the application site and the surrounding study area in November 2015.
- 10.17 During the site visits, the weather conditions were variable, but visibility was generally moderate (between 4-10km) and considered suitable for assessing all views for this assessment.
- 10.18 Use has been made of 3D computer models to generate zones of theoretical visibility ('ZTVs'), identify potential viewpoints and create perspective views, which in turn have been used to inform the assessment of magnitude of change for individual viewpoints.
- 10.19 Photographs provide an aid to assessing landscape and visual effects. The photographs illustrate views under the particular conditions prevailing at the time of carrying out the viewpoint photography. Effects vary depending on light and weather conditions and also the time of day and time of year. Accordingly, this assessment endeavours to assess "worst case" conditions within the written assessment.
- 10.20 No technical difficulties were encountered in assessing the landscape and visual impacts of the proposed development, although the weather conditions during the site visit were variable as noted above.

### Consultation

- 10.21 As part of a formal 'scoping' process (refer to chapter 1), SLR submitted a scoping request (October 2015) to the local planning authority, which identified visual impact and landscape character as topics, potentially with environmental effects that would be considered as part of a subsequent ES.
- 10.22 The 11 viewpoints included in this assessment were submitted to Nottinghamshire County Council's Landscape and Reclamation Team in November 2015 for comment but no response was received.

### LANDSCAPE PLANNING CONTEXT

- 10.23 Full details of the relevant planning policy context of the application site are described in Chapter 4 of this ES.
- 10.24 A summary of relevant landscape policies from the National Planning Policy Framework (2012), Nottinghamshire Minerals Local Plan and Bassetlaw District Local Development Framework, Core Strategy and Management Policies DPD (adopted 2011) is set out in Appendix 10/2.
- 10.25 In summary, this landscape planning policy context requires consideration of good design as a key aspect of sustainable development, both into its siting and landscaping treatments and ensure that any development is not

detrimental to the character and appearance of the site and its surrounding environment.

- 10.26 Any designations which are of particular relevance to this assessment are examined below, under the consideration of 'landscape value'.

### THE DEVELOPMENT PROPOSAL

- 10.27 Full details of the proposed development are described in Chapter 3 of this ES and the following items have been examined in detail due to their specific landscape and visual implications:

- construction works (drilling of monitoring boreholes, site establishment including a new access onto the A634, gates and fences, soils stripping and storage, welfare and parking);
- drilling and evaluation (including exploratory vertical multi core well to recover samples from and measure the properties of geological formations that underlie the site, testing and retention); and
- decommissioning and restoration of the site back to its current agricultural use.

### Timescales and Permanency of Development

- 10.28 GLVIA3 refers to effects that last for up to five years as being short term. For this project, this includes all of the following phases:

- 3 month construction;
- 4 month installation operation and removal of drilling rig;
- 2 year retention period; and
- 2 month decommissioning and restoration.

- 10.29 The proposed final restoration scheme would then be a permanent feature.

### Design Development and Built-in Mitigation

- 10.30 The proposed development incorporates design evolution and built-in mitigation devised as part of project team discussions and impact assessment, as well as other consultations.

- 10.31 The following landscape strategy has the following elements:

- hedgerow management, to allow existing hedgerows around the perimeter of the site to grow out / in height, by cutting sides only (whilst avoiding sight lines for road access);
- strengthening/infill planting of hedgerows around site using locally native tree species to increase landscape structure, enclosure / screening and habitat connectivity (whilst avoiding sight lines for road access);
- use of 2.5m high hoarding around site perimeter and 3m high temporary soil storage along roadside, on inside of the heras fence, to provide screening of ground level disturbance and activity. The

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fencing and hoarding would be painted a recessive dark green colour and the mounds would be grass seeded immediately following construction to improve assimilation with the landscape setting; and

- the short-term nature of the development and the careful stripping and recovery of soil means that the site should be capable of being returned to a similar state as existing, as part of the final restoration of the site.

### Potential Sources of Landscape and Visual Effect

10.32 The main landscape and visual elements of the proposed development include the following:

- clearance of existing vegetation and land cover;
- tree and shrub management and planting around the periphery of the site;
- installation and operation of new access, fences, soil bund, hardstanding, plant, buildings and other structures within the site;
- movement of plant, machinery and vehicles within, to and from the site; and
- removal of all structures and final restoration.

10.33 The following key elements would form part of the construction phase:

- 7.5m wide tarmac road to 15m in from the public highway, with associated bellmouth and removal of existing trees for visibility plays. 3m high welded mesh fencing to be installed along the internal road access, with gates;
- 2m high outer heras fencing offset 8m from existing hedgerows to the east and south, with inner 2.5m high hoarding fence offset a further 3m inside;
- 90m by 100m hardstanding area, with associated cut in the west and fill in the east of up to 1m and 3m high soil bunds to east of the site;
- 2-3m high containers and cabins around the inside of the inner fence and also as accommodation and security within the car parking area at the north of the site.

10.34 The following key elements would form part of the drilling operations:

- A drilling rig with a height of up to 60m, located towards the centre of the site with 11.5m high rig platform;
- Storage tanks up to 10m high, as well as other ancillary structures such as diesel tanks, generators, pumps, etc.

10.35 As part of the retention phase, the rig and much of the ancillary structures would be removed, leaving a 2.5m security fence around the cellar, the perimeter fences, soil storage bund and a number of cabins.

10.36 There are potential direct effects upon landscape character, elements and features within the application site itself and then potential effects upon landscape character and visual amenity of offsite receptors in the immediate



surrounding area. The spatial extent of landscape and visual effects are principally local.

### Potential Indirect Effects

- 10.37 Typically, the main potential indirect impact associated with development projects relates to traffic generated from the development, as this would have a potential visual impact for other users of the local communication network, and a general impact on the scenic quality of local views.
- 10.38 The vehicle movements would vary over the different stages of the development from a maximum of 56 vehicle movements a day during the construction and restoration phases reducing to 10 movements a day during the evaluation phase.
- 10.39 The A634 is an already relatively busy road, with a range of vehicles observed to be using the route during the fieldwork (a more detailed appraisal is set out in the Transport Assessment in Chapter 6 of the ES).
- 10.40 The increase in traffic would occur over a short-term period only and whilst it is taking place it is unlikely to alter the existing scenic quality of the road corridor especially at locations away from the site access junction; therefore, the proposals do not represent an additional significant indirect visual impact in this respect. Viewpoints 2, 3, 6 and 9 have been included to represent views along this road corridor.

### Lighting

- 10.41 The operations would require some artificial lighting for health, safety and security requirements and allow 24 hour working. This includes aviation warning lights and horizontal fluorescent strip lights on the rig, as well as other warning lights within and around the site. All lighting would be suitably set up, positioned and directed to only light the site and operations and to minimise light spill outside of the site as far as is practicable.
- 10.42 Appendix 10/6 provides a Site Light Spill Assessment carried out by Ramboll in March 2016. The modelling in this report confirms that lux levels would meet the requirements of an existing rural / low district brightness situation (based on criteria set out in the Institute of Lighting Professionals: Guidance Notes for Reduction of Obtrusive Lighting GN01:2011). This is mainly due to the 2.5m high site hoarding around the perimeter of the site. The linear fluorescent luminaires on the rig may contribute to sky glow, however this is not considered to result in potentially significant landscape and visual effects due to their temporary and short term nature. In relation to the nearby residential properties, it is also confirmed that due to distance, the illuminance values would present no issue to the residents.



## LANDSCAPE EFFECTS

- 10.43 A study area of up to 5km surrounding the application site has been adopted for this assessment, based on interpretation of the ZTV maps and experience of similar projects.

## Landscape Baseline

- 10.44 Baseline conditions for the application site and surrounding study area have been assessed and described below.

## *Character of the Landscape*

- 10.45 Appendix 10/3 of this chapter presents a summary of the relevant published assessments at national and local authority scales:
- the application site lies on the northern edge of National Character Area NCA 49 – Sherwood; and
  - the Nottinghamshire Countryside Appraisal describes the application site as located within “Sherwood” regional character area and “Sandstone Estatelands” landscape character type, with the boundary of the adjacent “Idle Lowlands” regional character area (“Village Sandlands”) approximately 1km to the north and east; and
  - Bassetlaw Landscape Character Assessment also identifies the site within “Sherwood”, but within Policy Zone 40: Babworth.
- 10.46 A review of the landscape attributes at the application site and surrounding area are reported in detail in Appendix 10/3.
- 10.47 The analysis of existing landscape attributes has concluded that the study area is generally consistent with the published key characteristics for “Sherwood Sandstone Estatelands” as described in the Nottinghamshire Countryside Appraisal (*op cit*) and Policy Zone: 40 Babworth within Bassetlaw Landscape Character Assessment (*op cit*) with large scale rolling topography, arable and grassland fields, low-cut hawthorn hedges and wooded skylines.
- 10.48 At a local level, the application site can be classified as “large-scale gently sloping arable field and adjacent roadside verge”.

## *Trends and change*

- 10.49 The study area has been subject to various past land use influences, with landscape evolution and change for “Sherwood Sandstone Estatelands” described by Nottinghamshire Countryside Appraisal (*op cit*) as follows:
- mainly arable use of the sandy soils, highly permeable parent rock and low rainfall averages;
  - increases in woodland cover during the 18<sup>th</sup> and 19<sup>th</sup> centuries due to landscape improvement, game preservation, timber production and fuel supply;

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- transportation included establishment of A1 and railway lines;
  - urban and industrial development, with main areas to the south and west, as well as pit closures influencing social, economic and environmental conditions locally; and
  - tourism opportunities, mainly relating to Sherwood Forest to the south of the study area.
- 10.50 As described in Appendix 10/3, the landscape actions for Policy Zone: 40 Babworth within Bassetlaw Landscape Character Assessment (*op cit*) is to “conserve and create”, for example:
- conserve the character, setting and biodiversity of the Chesterfield Canal corridor and Morton Park, create ecological enhancements where appropriate;
  - conserve the sparsely settled and rural character of the landscape by concentrating small scale new development around transport corridors, create woodland to contain and soften built development, preferably in advance of development;
  - contain new development within existing field boundaries; and
  - conserve and respect the historic character and setting of Morton Park/Babworth Park/Ranby Hall and surroundings.
- 10.51 As noted in Appendix 10/3, there are two recently consented solar farm developments in the local area, firstly 14ha of land off A634, north of Jubilee Farm and also 8.7ha of land to the north of Station Road on the north-eastern edge of Barnby Moor.
- 10.52 In the absence of the proposed development it is assumed that the application site would continue in its current state, being used as arable land.

### Landscape Value

- 10.53 Table 8-3 provides summary analysis of the criteria and factors that influence landscape value (taken from GLVIA3, Box 5.1 *op cit*), as they apply to application site and the wider study area.
- 10.54 Overall the landscape value of the application site and immediately surrounding land cover (sparsely settled farmland with large geometric fields and straight roads) is considered to be of local value.

**Table 8-3**  
**Analysis of Factors Influencing Landscape Value (from GLVIA3)**

Landscape Element	Description
Landscape Quality	The study area has a variable landscape quality (Policy Zone 40: Babworth is described as being in a moderate landscape condition). The open arable and grassland fields with low-cut hawthorn hedges are typically intensively managed, especially within and around the site, but also set amongst estate plantations and belts of mature

Landscape Element	Description
	trees, particularly further to the south. Straight roads, railway lines and overhead powerlines are also present providing more modern elements.
Scenic Quality	Nottinghamshire Countryside Appraisal for “Sherwood Sandstone Estatelands” describes how “views are enclosed by wooded skylines”, and this in combination with the “large-scale rolling topography” typically results in middle distance views. Such views are generally more scenic where there is an absence of built or industrial development/detractors or where mature trees feature in views. Farmsteads and properties around the edges of settlements were visible to varying degrees from footpaths in the area and result in sparsely settled character. Overhead powerlines were also visible to varying degrees. Policy Zone 40: Babworth is described as having a coherent visual unity, but with some detracting features.
Rarity	The landscape of the site (and associated views and vistas) is not especially valued for their rarity. The “Sherwood Sandstone Estatelands” character area itself, whilst distinctive, is also not described as a rare landscape character type.
Representativeness	The gently sloping arable field of the application site is considered to be a representative feature of the wider “Sherwood Sandstone Estatelands” character area and Policy Zone 40: Babworth.
Conservation Interests	There are no ecological or cultural heritage designations within the application site, although there are listed buildings in the settlements of Blyth, Torworth and Barnby Moor, with conservation areas also at Torworth and Barnby Moor. Daneshill Lakes Local Nature Reserve to the east is managed for its nature conservation interest. Four SINCs fall within Policy Zone 40: Babworth including Chesterfield Canal and Morton Park, whilst cultural integrity is described as variable.
Recreational Value	Although there are public footpaths and bridleways to the north, west and south of the site, the site itself has no public access across it. Daneshill Lakes Local Nature Reserve to the east has parking area identified on the OS map and the Cuckoo Way follows the towpath of the Chesterfield Canal to the south, with a parking area where it crosses under the Old London Road.
Perceptual Aspects	A degree of tranquillity is present within the site, albeit with A634 road adjacent; this is similar to the wider study area and “Sherwood Sandstone Estatelands” with its distinctive pattern of large geometric fields, straight roads (such as A1) and overhead powerlines.
Associations	No evidence of artistic or literary associations with the landscape of the application site or study area has been noted as part of this assessment.

## Prediction of Landscape Effects

- 10.55 As described in paragraph 5.34 of GLVIA3, landscape receptors that may be affected by the scheme include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects.
- 10.56 The effects resulting from the proposed development relate potentially to the following:

- physical disturbance of landscape elements and features and reinstatement of land cover;
- alteration to aesthetic and perceptual aspects such as scale, simplicity, openness and sense of tranquillity and wildness; and
- alteration to overall landscape character and key characteristics.

### Assessment of Significance of Residual Landscape Effects

- 10.57 The assessment of significance of residual landscape effects is carried out for each landscape effect thought likely to occur and for the relevant landscape receptor that may be altered by the scheme (such as individual elements or features, specific aesthetic and perceptual aspects and overall character and key characteristics).

### Criteria

- 10.58 The criteria for assessing the significance of residual landscape effects (i.e. after the built-in mitigation) are described in GLVIA3 and set out in Appendix 10/1 to this chapter. They are based on the combination of sensitivity (susceptibility of the receptor to the change proposed and the value attached to the receptor) and magnitude of change (size and scale, geographical extent, duration and reversibility).
- 10.59 As described in paragraph 5.56 of GLVIA3, at opposite ends of the spectrum, the following may apply to landscape effects:
- *Major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;*
  - *Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant.*

### Physical Disturbance of Individual Elements and Features

- 10.60 Physical disturbance of individual elements and features occurs at the site level only (within the application site itself).
- 10.61 The application site comprises part of an arable field and the improvement and associated visibility splays of an existing double gateway/break in a section of low-cut hedgerow and adjacent planted roadside verge to enable access onto the public highway.
- 10.62 The sensitivity of the application site to the type of change proposed is low, due to the following:
- low susceptibility of the large scale, gently sloping and simple landform, lacking in mature trees, ditches or other natural features and which

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overall is considered to be able to accommodate disturbance from the proposed development; and

- local value of the site, as there are no landscape designations in place and the physical state is currently relatively poor condition (intensively managed arable) and reduced scenic quality (with visibility of man-made features), with no conservation or recreational interest. Tranquillity is present within the site, but influenced by the proximity of the road. No particularly rare elements or features present and is not a rare landscape type.

10.63 The magnitude of change upon individual elements and features would be as follows:

- high during the construction (site clearance, removal of some roadside vegetation for visibility splays and preparation of hardstanding, fencing and access), drilling and retention period; and
- negligible to low after the decommissioning of all structures and final restoration, where arable use is reinstated and any hedgerow management and tree planting carried out as part of the initial site establishment/mitigation is retained.

10.64 The potential effect relating to the physical differences between the landscape elements and features at the application site is therefore considered to be no more than moderate and adverse during the short-term operational phases, but with negligible to slight beneficial changes after final restoration; overall this is not a significant effect.

### *Alterations to Aesthetic and Perceptual Aspects*

10.65 Changes to aesthetic and perceptual aspects occur principally within the application site and its immediate landscape setting, with effects on the wider landscape setting being influenced by the size and scale of the new elements and their visibility.

10.66 The sensitivity of the application site and its immediate setting to the type of change proposed is considered to be low, due to the following:

- low susceptibility of the pattern of large geometric fields and straight roads, which is sparsely settled, which is quite simple, with a degree of tranquillity but close to visible signs of human activity and development. Overall these aspects are considered to be able to accommodate disturbance from the proposed development; and
- local value of the site, as previously described above, in relation to landscape elements and features.

10.67 The temporary magnitude of change to the aesthetic and perceptual aspects during operational phases would be medium to high, due to the following:

- scale of the application site would reduce to medium, with associated enclosure (from fences and soil bund), whilst the wider setting would remain large scale and generally more open;

- the pattern within the application site would become more organised as a result of the site layout (fences, hardstanding, bunds, parking areas and structures), which is nevertheless geometric and straight and therefore similar to the wider setting;
  - the alterations to form would be more apparent (cut and fill of the hardstanding and adjacent soil storage mound, with vertical fencing, cabins and drill rig);
  - the alterations to colours would be apparent from the existing muted arable field, to the wider variety of imported hardstanding and fencing materials and other temporary structures and vehicles;
  - the overall degree of diversity within the site would increase, associated with the combination of proposed elements and features; and
  - reduction in tranquillity due to vehicle movements and drilling activities.
- 10.68 There would be no change to the aesthetic and perceptual aspects after final restoration.
- 10.69 The potential effects relating to the aesthetic and perceptual aspects are therefore considered to be no more than moderate and adverse during the short-term operational phases, with no change after final restoration; overall this is not a significant effect.

### *Alterations to Overall Character and Key Characteristics*

- 10.70 The alterations to overall landscape character and key characteristics result from a combination of changes to physical elements and features and the changes to the aesthetic and perceptual aspects of views/inter-visibility. Such effects occur both within the application site and its immediate landscape setting (and these are considered together).
- 10.71 The susceptibility to change resulting from the proposed development for this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) as a whole is considered to be negligible to low, due to the following characteristics:
- scale, where large scale indicates lower sensitivity, and landform, where absence of strong topographical variety, featureless, convex or flat indicates a lower sensitivity (*“large-scale rolling topography”* and *“large arable and grass fields”*);
  - pattern and complexity, where simple, regular or uniform indicates a lower sensitivity (*“large arable and grass fields”* and *“straight roads with wide tracks”*);
  - settlements, man-made influence and skylines, where presence of existing man-made features indicate lower sensitivity (although sparsely settled with *“isolated brick-built farmsteads and estate cottages”* there are overhead powerlines to the west of the site); and
  - inter-visibility with adjacent sensitive landscapes, where little inter-visibility indicates lower sensitivity (*“estate plantations and belts of trees”* and *“views enclosed by wooded skylines”*).



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- 10.72 The overall value of this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) is of a local level, due to the following:
- lack of landscape designations;
  - landscape and scenic quality varies, but influenced by the distinctive pattern of large geometric fields and straight roads, sparsely settled nature, as well as overhead powerlines more locally; and
  - features of local recreational value, such as the public rights of way and access to Daneshill Lakes or along the Cuckoo Way / Chesterfield Canal.
- 10.73 The overall sensitivity of this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) to the proposed development is considered to be low.
- 10.74 The magnitude of change relating to the alteration of overall landscape character this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) as a whole is considered to be low, due to the following:
- the size of the Sherwood Policy Zone 40: Babworth (c.4,000ha) is relatively large in area in comparison to the application site. Consequently the size or scale of change to the area as a whole (both in terms of physical disturbance and changes to views) are limited;
  - the key characteristics of “Sherwood”, “Sandstone Estatelands” and Policy Zone 40: Babworth would continue as existing. There would be no new key characteristics introduced, but the addition of a small area of this type of development is nevertheless a detracting feature, of which there are already “some” acknowledged in the area; and
  - the duration of the operational phases would be short-term, but the final restoration back to existing conditions would be permanent.
- 10.75 The proposed development is unlikely to prevent the identified landscape actions for “Policy Zone 40: Babworth”, as follows:
- the character and setting of the Chesterfield Canal corridor and Morton Park would not be significantly adversely affected (also refer to viewpoint 10);
  - the sparsely settled and rural character of the landscape would be conserved, with the small scale new development being situated adjacent to an existing transport corridor;
  - the new development would be contained within the existing field boundaries; and
  - the historic character and setting of Morton Park/Babworth Park/Ranby Hall and surroundings would not be adversely affected (also refer to viewpoint 8, which is 1km nearer than Ranby Hall).
- 10.76 Thus, the overall landscape effects upon the application site and this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) as a whole are considered to be slight and not significant. The effects are adverse in nature during operational phases, with no change to the baseline after final restoration.



### *Cumulative Landscape Effects*

- 10.77 This part of the assessment focuses on the cumulative landscape effects of the proposed development in conjunction with the recently consented solar farm on 14ha land off A634 to the north of Jubilee Farm. The LVIA for the solar farm was prepared by LDA Design in July 2014.
- 10.78 The solar farm project which will consist of rows of 3m high panels and enclosed by mesh fencing and have small transformers and substations, is approximately 0.7km north of the proposed development at its nearest point and is approximately 4-5 times its area.
- 10.79 The LVIA for the solar farm stated in section 6.1 that *“The construction and eventual decommissioning of the solar panels would be short-term activities involving the movement of vehicles, localised excavations and the installation of the panels using small scale construction machinery. Neither construction nor decommissioning activities would give rise to notable landscape character or visual effects over and above those of the operational site.”* Even if construction of the two projects happened concurrently the effects upon the tranquillity of the road corridor due to the additional vehicle movements would still be limited.
- 10.80 The solar farm is adjacent to and expands the existing Jubilee Farm farmstead footprint which, in conjunction with barns, covers approximately 100m x 60m. The planning consent is for 25 years operational life after which point it would be removed and the land restored to its former agricultural condition.
- 10.81 The LVIA for the solar farm described how *“The greatest effects would be on the character of the site itself due to the addition to the solar farm to what is currently a group of small arable fields. Effects on the character of the site would be Moderate and, on balance, Adverse”*. The LVIA for the solar farm then continues by describing how *“overall effects on the character of the character area within the study area would be Negligible magnitude, Minimal and Neutral”*.
- 10.82 Solar farms, exploratory borehole/drilling rigs and/or a broader description of “energy projects” are not currently characteristic elements or features in the published description for Sherwood Policy Zone 40: Babworth, although coal mining is mentioned. Furthermore it is not anticipated that the addition of the proposed development would result in the description being altered due to the following:
- the combined areas of solar farm and the proposed development would not result in a single expansive energy project as each area is and will remain separated by a wide strip of undisturbed farmland areas;
  - the combined areas overall would also still constitute only a limited part of the much larger “Sherwood Policy Zone 40: Babworth” overall; and
  - both projects are time limited, with the proposed development in particular being short-term in duration.

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- 10.83 Potential cumulative effects in relation to existing vertical structures within the landscape such as power infrastructure have also been considered. Power infrastructure is part of the wider landscape around the application site and from certain viewpoints would be seen together with the proposed drilling rig, however the short duration of the proposed drilling period ensures that cumulative effects are not significant.
- 10.84 The addition of the proposed development to the solar farm and power infrastructure would not give rise to changes in landscape character of such an extent as to have major effects on its key characteristics or transform it into a different character type; it is not considered that the development “tips the balance” through its additional effects.

### *Summary Statement of the Significant Landscape Effects*

- 10.85 Overall this assessment has not identified any significant (major or moderate/major) landscape effects as a result of the proposed development.

## **VISUAL EFFECTS**

- 10.86 A study area of up to 5km surrounding the application site has been adopted for this assessment, based on the interpretation of the ZTV maps and experience of similar projects.

### **Visual Baseline**

- 10.87 Baseline conditions for the application site and surrounding study area have been assessed and are described below.

### *Visual Receptors*

- 10.88 Paragraph 6.13 of GLVIA3 defines visual receptors as people living in the area; people who work there, people passing through on road, rail or other forms of transport, people visiting promoted landscapes or attractions; and people engaged in recreation of different types.
- 10.89 Initially, it is necessary to define the extent of visibility both within and outside the application site and how it relates to potential receptors. Comparative zones of theoretical visibility (ZTV) were calculated using 3D digital terrain model in using LSS software (McCarthy Taylor) in accordance with the method statement set out in Appendix 10/4:
- 10m high block – Drawing TL 10/2; and
  - 60m high block – Drawing TL 10/3.
- 10.90 Each ZTV is based on a simple block, covering the site area and without the proposed perimeter fencing or bunds formed during site establishment, included as screening features.
- 10.91 Furthermore, the ZTVs are based on a bare terrain; that is, the computer model does not include any vegetation, structures or other buildings.

- 10.92 As a result, the extent of visibility illustrated on the drawings is very much a worst case scenario and would be greatly reduced if other potentially screening features were included in the model.
- 10.93 The ZTV assessment is limited to subtended vertical angles above 0.25°. Areas with less than this theoretical angle were considered unlikely to generate significant effects.
- 10.94 The general theoretical visibility of the 10m high block, which approximately represents the proposed storage tanks is limited to the following areas:
- the area of visible vertical angle above 3 degrees extends for c.0.2km around the application site and covers part of A634 immediately to the north, east and south-east and farmland;
  - the area of visible vertical angle between 1 and 3 degrees extends for a further c.0.4km over more of the A634 and two public rights of way and a minor road to the north and west;
  - the areas of visible vertical angle of between 0.25 and 1 degree extend for a further c.2km to the north and east, covering parts of Ranskill and Torworth and several isolated properties and farmsteads, the A638 Great North Road and railway line, as well as Daneshill Lakes. It also extends for approximately c.1.5km to the south and west, including parts of A634 and A1, minor roads and several isolated properties and farmsteads; and
  - there is no visibility predicted over Blyth, much of Ranskill to the north-east and Barnby Moor to the south-east.
- 10.95 The general theoretical visibility of the 60m high block, which approximately represents the top of the highest possible drilling rig, extends more consistently over a wider area, as follows:
- the area of visible vertical angle above 3 degrees extends to c.1.1km in all directions including A634, parts of the A638 Great North Road and small part of A1 and several isolated properties and farmsteads and public rights of way;
  - the area of visible vertical angle between 1 and 3 degrees extends for a further c.2km to the north, east and south and c.1km to the west and includes Ranskill, Torworth, Barnby Moor and Blyth, as well as several isolated properties and farmsteads and connecting roads and public rights of way; and
  - the areas of visible vertical angle of between 0.25 and 1 degree typically extends for over 1km further in all directions.
- 10.96 Following the initial desk based modelling of theoretical visibility, fieldwork was carried out to review the degree of additional screening provided by vegetation and/or built up areas and buildings.
- 10.97 Screening from trees and hedgerows within the study area is relatively high, in particular along roadsides and within settlements. Views are possible where hedgerows have been removed, or from gateways and road junctions, and/or where the land rises. The application site has some enclosure from

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the conifer plantation/tree belt to the south-west, although medium to long views over the large-scale rolling topography, enclosed by wooded skylines is characteristic.

- 10.98 Potential visual receptors in the area covered by the ZTVs include the following:
- inhabitants of settlements and residential properties, such as Ranskill and Torworth to the north, Barnby Moor to the south-east and Blyth to the north-west, but also the dwellings within 1km of the site such as Jubilee Farm, Billy Button Cottage, College Farm and Beech Farm and further afield elsewhere;
  - users of public highways such as A634 immediately adjacent and A638 Great North Road to the east and A1 to the west, as well as B6045 and other minor roads connecting settlements and properties elsewhere;
  - users of rights of way or other informal recreational access to Daneshill Lakes; and
  - users of Cuckoo Way and towpath adjacent to the Chesterfield Canal to the south.
- 10.99 Potential visual effects upon heritage assets are reported in the cultural heritage chapter.

### *Viewpoints - representative, specific, illustrative*

- 10.100 As stated in paragraph 6.19 of GLVIA3 (*op cit*), viewpoints selected for inclusion in the assessment and for illustration of the visual effects fall broadly into three groups: representative; specific; and illustrative.
- 10.101 In accordance with paragraph 6.20 of GLVIA3, the selection of the final viewpoints used for the assessment has taken account of the following range of factors:
- accessibility to the public;
  - the potential number and sensitivity of viewers who may be affected;
  - the viewing direction, distance (i.e. short-, medium-, and long-distance views) and elevation;
  - the nature of the viewing experience (for example, static views, views from settlements and views from sequential points along routes);
  - the view type (for example panoramas, vistas and glimpses); and
  - the potential for cumulative views of the proposed development in conjunction with other developments.
- 10.102 Photography and fieldwork analysis of the views of the application site were then carried out from the surrounding landscape. The object was to determine which locations offer the clearest views of the application site and/or are most accessible to the public and to identify representative viewpoints for detailed viewpoint analysis.
- 10.103 The locations of the selected viewpoints are shown on Drawings TL 10/1 to 10/3 and existing photography drawing sheets are listed in Table 10-4 below.

- 10.104 Photographs illustrating views from a selected series of viewpoints were taken using a Nikon D70 digital camera. The camera was set to a focal length which is the equivalent of a 50mm lens for a 35mm format camera. The nature of the views was of relatively wide panoramas and it was therefore considered beneficial to present the photographs in this way. The panoramic views consist of three or four photographic frames and were digitally merged together using industry standard software and followed Landscape Institute Advice Note 01/11. Each photographic sheet includes the viewpoint location co-ordinates.
- 10.105 In addition to the existing photography drawing sheets, the detailed descriptions of the existing views are included in the individual viewpoint analysis in Appendix 10/5 to this chapter.

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**Table 10-4**  
**List of Viewpoints**

VP	Location/Description	Drawing
1	Public right of way to the south of Ranskill village. This viewpoint represents the recreational users of this route and to a degree, local residents, which are set back slightly. It is located within "Idle Lowlands Village Sandlands" as described in the Nottinghamshire Countryside Appraisal.	TL 10/4
2	View from the junction between A634 and Graves Moor Lane. This viewpoint represents road users of this route. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/5
3	View from the junction between the A634 and a public right of way south of Jubilee Farm. This viewpoint represents the views of recreational visitors to the route and road users, as well as local residents at Jubilee Farm. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/6
4	View from Torworth Grange on the Great North Road (A638). This viewpoint represents the views of users of the road network and, to a degree, local residents which are set back slightly. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/7
5	View from public right of way at Daneshill Lakes. This viewpoint represents the views of recreational visitors to the local nature reserve and to a degree, passengers on the adjacent railway line. It is located within "Idle Lowlands Village Sandlands" as described in the Nottinghamshire Countryside Appraisal.	TL 10/8
6	View from A634 adjacent to the application site. This viewpoint represents the road users of this route. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/9
7	View from Tinker Lane, south of Beech Farm at junction with public right of way. This viewpoint represents users of the right of way and to a degree, local residents at the farm itself. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/10
8	View from A1, at junction with minor road and public right of way. This viewpoint represents the road users and recreational users of this route. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/11

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VP	Location/Description	Drawing
9	View from the junction between Tinker Lane and A634. This viewpoint represents the road users and recreational users of this route. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/12
10	View from the Chesterfield Canal towpath (Cuckoo Way), east of Forest Top Lock. This viewpoint represents recreational visitors to the canal and towpath. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/13
11	View from Billy Button Lane, at a junction with public right of way and approximately 200m south of Billy Button Cottage. This viewpoint represents the views of recreational visitors to the route and road users, as well as local residents. It is located within "Sherwood Sandstone Estatelands" as described in the Nottinghamshire Countryside Appraisal and Policy Zone 40: Babworth in the Landscape Character Assessment - Bassetlaw.	TL 10/14

## Sequential views

10.106 The viewpoints selected above include four locations along the A634 as part of the consideration of sequential views upon this nearby route.

## Prediction of Visual Effects

10.107 As described in paragraph 6.26 of GLVIA3, changes in views and visual amenity may arise from built or engineered forms and/or soft landscape elements of the development.

## Changes in views from viewpoints

10.108 For all viewpoints the potential changes have been reviewed by using 3D models to analyse spatial data (distances and heights/elevations) and generate perspective views, although these have not been included in this report.

10.109 Each photosheet includes an overlay annotation of the height and location of a 60m high drill rig (recognising that the actual height may be lower), in an artificial red colour to provide the greatest contrast for illustrative purposes.

10.110 Appendix 10/5 provides a detailed analysis of potential change for each individual representative viewpoint and identified the following:

- the drilling rig would be the most visible feature, appearing as a relatively narrow and tall industrial element, often seen in the context of the existing overhead powerlines that pass close by the western boundary of the site, and a small part of a broader horizontal skyline;
- the lower parts of the development (for example the perimeter fencing, tanks or cabins) would typically be much less visible, being confined



principally to a 1-2km section of the A634 which passes by the site. At other locations the lower parts of the development would be screened and/or set down on the horizon and/or backgrounded;

- in addition to the short duration of time that the development may be visible, intervening vegetation such as roadside hedgerows and other trees result in the geographical extent of any potential views being limited; and
- after final restoration there would be no change to views.

10.111 The ZTVs indicated some theoretical visibility around residential areas, such as Ranskill and Torworth to the north, Barnby Moor to the south-east and Blyth to the north-west. However, the actual visibility of the proposed development is limited by the topography and intervening or adjacent buildings and vegetation. Views are more open towards the edges of the settlements and/or from slightly elevated positions, rather than within the centre of settlements or from lower lying positions:

- Viewpoint 1 was positioned on the southern edge of Ranskill. Although views opened out over the large-scale rolling topography and arable fields, these, where framed in the direction of the application site by vegetation and the character became even further enclosed along the pathways and gardens leading into the village itself;
- Viewpoint 2 was positioned on the A634 just before the road dropped away to Blyth and landform and vegetation encloses views. Even at viewpoint 2, much of the lower elements of the proposed development was obscured by Jubilee Farm, with the exception of the drill rig itself;
- Viewpoint 4 was positioned on the southern edge of Torworth, at a narrow break in the roadside hedgerow which was virtually continuous north of this point leading up to the village itself (and therefore subsequently screening views); and
- representative Viewpoint 9 was positioned relatively close to the western edge of Barnby Moor, where framed, short to medium distance views over rolling topography and arable fields were possible, but on the road leading back into the village itself, the corridor was much more enclosed reducing visibility.

10.112 For smaller groups or isolated properties (such as Jubilee Farm, Billy Button Cottage, College Farm and Beech Farm) which would have a higher potential for views out to the site, the presence of vegetation around the dwellings would still influence the degree of change to views, as well as the elevations relative to and distances from the property to the application site. The orientation of the dwellings themselves would also affect the degree of visibility for residential receptors, for example whether the views would be direct or indirect (or oblique). It is considered that direct views are where the difference between the direction of view from the main front or rear façade of each building and the direction to the proposed development is less than 45°. Correspondingly indirect views are those where there is a difference of over 45° between the two bearings. The following properties, which are considered to be a representative selection were reviewed:

- Viewpoint 3 was positioned next to (south of) Jubilee Farm, where the façade is south facing and therefore allowing direct views towards the proposed development. Garden trees and vegetation, however filter views in this direction;
- Viewpoint 4 was positioned next to Torworth Grange, where the façade is south facing and therefore resulting in indirect views towards the proposed development to the west;
- Viewpoint 7 was near to Beech Farm, where the main façade is east facing and allowing direct views towards the proposed development. Garden and other intervening hedgerows and vegetation, however filter views in this direction; and
- the front façade for Billy Button Cottage is facing east and therefore away from the proposed development, whilst the rear is west facing and resulting in indirect views. Viewpoint 11 is located approximately 200m south of this property at a junction between a right of way and the lane and where the development is mostly screened by vegetation.

10.113 In addition there are a number of residential properties on the two roads leading westwards from Torworth and Ranskill, where either front or rear facades allow direct views to the development (depending on which side of the road they are positioned). Some of these properties are single storey and/or enclosed by garden or other intervening vegetation. Nevertheless, wherever change would be discernible at these locations, the underlying landscape character or view composition is anticipated to be similar to the baseline.

10.114 The visibility from road and recreational routes would inevitably be influenced by the direction of travel and position of the proposed development relative to the viewer (for example whether along or in line with the route/road corridor and in the field of view of the traveller, or perpendicular to the route and difficult to see without the traveller turning away). Furthermore, the presence of other existing focal points within the route corridor as well as adjacent buildings and roadside vegetation and other boundary features would influence impacts on composition or character.

10.115 For most of the road users the application site is offset, away from and/or mostly perpendicular to the main direction of travel:

- The A1 is orientated north to south and offset by 1.2km at its nearest point to the west. It also passes through cuttings in places and intervening roadside vegetation further screens the majority of views. Viewpoint 8 is the nearest representative location at a junction with a minor road and a break in vegetation. At this location the drill rig would be visible above the wooded horizon, but the remaining structures would be hidden from this location by the intervening landform;
- The A638 Great North Road is orientated north to south and offset by c.0.7km at its nearest point to the east. Intervening roadside vegetation further screens the majority of views along this route. Viewpoint 4 is the nearest representative location at a break in vegetation. The drill rig would be visible above the horizon at this location and the majority of the remaining structures would be set down and unlikely to register much

above the skyline/backgrounded by the tree belt to the south-west of the site; and

- The B6045 is orientated east to west and offset by c2km at its nearest point to the north. Intervening roadside vegetation further screens the majority of views from this route.

10.116 As noted above, representative Viewpoints 2, 3, 6 and 9 were positioned along the A634 which passes by the application site, in order to illustrate sequential views along this route:

- at the Viewpoint 2, the furthest north of the viewpoints, only the drill rig would be visible, with the remainder of the development obscured by Jubilee Farm. Viewpoint 3, to the south of Jubilee Farm, would have potentially clearer views of the development, albeit obscured by a roadside hedgerow tree;
- at the Viewpoint 9, the furthest south, only the drill rig would be visible, with the remainder of the development obscured by intervening landform. At Viewpoint 6, on the south-eastern corner of the site, the drill rig and bund, would be visible above the roadside hedgerow;
- vehicles entering and exiting the site would also be visible along this route and would add to the current traffic levels.

10.117 The railway line is orientated north to south and offset by c.1.5km to the east of the site. The ZTV for the rig covers most of this route as it passes through the study area, whilst the 10m high block covered c.2.1km. Therefore any passengers looking out over the landscape to the west (seated on the western side of the carriage), may have longer opportunity to see the rig rather than the lower level elements, although intervening vegetation, the speed of travel and the duration of the development would significantly reduce the impact of any potential effect.

10.118 There are several public rights of way in the local area, including:

- the Star Millennium Pathway, which follows a circular route from Torworth, via Billy Button Lane and A638. Representative viewpoints 3 and 11 were located on this route at open points and junctions with other roads. The drill rig would be visible above the horizon, partly obscured by intervening roadside hedgerow tree, with the majority of the remaining structures set down and unlikely to register much above the skyline from this location;
- a connecting right of way between A638 to Beech Farm and Tinker Lane that extends around the north, west and south of the site, with representative Viewpoints 7 and 9 positioned along its route. For both viewpoints however the drill rig would be the only visible element of the development; and
- Viewpoint 1 which was positioned on the southern edge of Ranskill, as described above, where views opened out over the large-scale rolling topography and arable fields.

10.119 The ZTVs for both the rig and the 10m high block of other infrastructure covered much of the Daneshill Lakes Nature Reserve and its recreational

footpaths. However, the fieldwork at this site and analysis of representative Viewpoint 5, confirmed that potential views would be screened by intervening vegetation. This viewpoint was located at a relatively open part of the site with the majority of the route assessed being enclosed by trees and shrubs. Furthermore views are focused towards the lakes rather than being offset some 1.6km away from the site.

- 10.120 The ZTV for the rig covered over 3km of the Cuckoo Way and towpath adjacent to the Chesterfield Canal, although the ZTV for the 10m high block of infrastructure did not cover any of it. Consequently representative Viewpoint 10 identifies potential views of the rig only, with the remainder of the development screened by intervening landform. This viewpoint was located at a break in vegetation with the majority of the route assessed being enclosed by hedgerows and trees. Nevertheless, users of this route would be offset from the application site by at least 2.6km at their nearest point and where it would be typically perpendicular to the direction of travel, as it follows the sinuous towpath route.

### Assessment of Significance of Residual Visual Effects

#### *Criteria*

- 10.121 The criteria for assessing the significance of residual visual effects (i.e. after the built-in mitigation) is described above and in GLVIA3 and based on the combination of the nature of the receptor likely to be affected (sensitivity) and the nature of effect likely to occur (magnitude).
- 10.122 As described in paragraph 6.44 of GLVIA3, at opposite ends of the spectrum, the following may apply to visual effects:
- effects on people who are particularly sensitive to changes in views and visual amenity are more likely to be significant;
  - effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant;
  - large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present in the view.

#### *Summary Assessment*

- 10.123 Overall there are no significant visual effects predicted on any of the individual representative viewpoints (i.e. major or major/moderate). Although there are several sensitive receptors in the study area (mainly residential and recreational), most would experience a small degree of change to the baseline condition; change is discernible but underlying landscape character or view composition would be similar to the baseline.
- 10.124 Using the detailed descriptions provided in Appendix 10/5, Table 10-5 summarises the residual visual effects resulting for each of the receptors at

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the representative viewpoints during short-term operational phases as follows:

- inhabitants of settlements and residential properties, such as Ranskill and Torworth to the north, Barnby Moor to the south-east and Blyth to the north-west, would have no more than moderate effect (e.g. Viewpoints 1, 2, 4 and 9);
- inhabitants of dwellings within 1km of the site such as Jubilee Farm, Billy Button Cottage, College Farm and Beech Farm and further afield elsewhere would have no more than moderate effect (e.g. Viewpoints 3, 7 and 11);
- users of public highways such as A634 immediately adjacent and A638 Great North Road to the east and A1 to the west, as well as B6045 and other minor roads connecting settlements and properties elsewhere would have no more than moderate effect (e.g. Viewpoints 2, 3, 4, 6, 8 and 9);
- users of public rights of way in general area, including parts of the “Star Millennium Pathway” would have no more than moderate effects (e.g. Viewpoints 1, 3, 7, 8 and 11)
- users of rights of way or other informal recreational access to Daneshill Lakes would have no change (e.g. Viewpoint 5); and
- users of Cuckoo Way and towpath adjacent to the Chesterfield Canal to the south would have no more than slight effect (e.g. Viewpoint 10).

10.125 After final restoration there would be no change, as the site would be returned to the existing conditions and corresponding reinstatement of views.

**Table 10-5**  
**Summary of Effect for each Viewpoint during Operational Phases**

VP	Location/ Description	Sensitivity	Magnitude	Significance
1	Public right of way to the south of Ranskill village	Medium to high (recreational visitors in an village fringe context and local resident)	Low and adverse whilst rig is visible and negligible and neutral during other operational phases	Moderate
2	View from the junction between A634 and Graves Moor Lane	Low (road users)	Low and adverse whilst rig is visible, with no change at any other time	Slight
3	View from the junction between the A634 and a public right of way south of Jubilee Farm	High (recreational visitors in a rural context, road users and local residents)	Low and adverse whilst rig is visible, negligible to low and adverse during other operational phases	Moderate
4	View from Torworth Grange on the Great North Road (A638)	Medium to high (road users and local residents)	Low and adverse whilst rig is visible and negligible and neutral during other operational phases	Moderate

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VP	Location/ Description	Sensitivity	Magnitude	Significance
5	View from public right of way at Daneshill Lakes	High (recreational visitors)	None	No change
6	View from A634 adjacent to the application site	Low (road users)	Medium and adverse during installation and removal of rig and low and neutral during the remaining period	Moderate
7	View from Tinker Lane, south of Beech Farm at junction with public right of way	Medium to high (road users and local residents)	Low and adverse whilst rig is visible and negligible and neutral during other operational phases	Moderate
8	View from A1, at junction with minor road and public right of way	Medium (road users and recreational walkers and visitors near to A1)	Low and adverse whilst rig is visible, with no change at any other time	Slight to moderate
9	View from the junction between Tinker Lane and A634	Medium (road users and recreational walkers and visitors at a road junction)	Low and adverse whilst rig is visible, with no change at any other time	Slight to moderate
10	View from the Chesterfield Canal towpath (Cuckoo Way), east of Forest Top Lock	High (recreational walkers and visitors to the canal and towpath)	Negligible to low and adverse whilst rig is visible, with no change at any other time	Slight
11	View from Billy Button Lane	High (recreational visitors in a rural context, road users and local residents)	Low and adverse whilst rig is visible, negligible to low and adverse during other operational phases	Moderate

### Cumulative Visual Effects

10.126 This part of the assessment focuses on the cumulative visual effects of the proposed development in conjunction with the consented solar farm north of Jubilee Farm, as previously described above.

10.127 The LVIA for the solar farm described how:

- “The extent of Large-scale visual effects, where the proposed solar farm would form a major new element in the views, would be generally limited. Within 50m from the site, where the tops of the solar panels and security fence would be seen above the hedgerow that lines A634 in the medium-term, effects would be Medium-scale”
- “Beyond this area and up to 1km, the extent of Small effects will be relatively localised due to the screening effects of localised vegetation, roadside embankments, and localised landform undulations interrupting views from the surrounding landscape”



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- *Beyond 1km, the effects of the proposed solar farm reduce to a Negligible scale. At these distances, the proposed development would form a very limited change in any views given the mixture of localised vegetation, settlement and undulating topography that screen the site from view.*
- 10.128 Of the representative viewpoints assessed in this Chapter (as set out in Table 10-5) the only location where the two projects would be simultaneously visible would be at the junction between Viewpoint 2 on A634 and Graves Moor Lane, to the north. Even though the two projects would be seen at this location as energy development/industrialisation, the broader character of rolling agricultural landscape would remain unchanged.
- 10.129 The other potential cumulative visual effects would be of a sequential nature, for example users of the A634 as they pass by each project or recreational visitors moving along the rights of way in the local area and catch glimpses of each. However, this is also considered to be limited and mitigated by the limited visibility of each and the nature of the proposals at the application site, as described above.
- 10.130 Overall, there are no significant cumulative visual effects anticipated as a result of the proposed development.

### CONCLUSIONS

- 10.131 This chapter has assessed the potential landscape and visual implications of the proposed development, as has been described in Chapter 3 above. This included a baseline study of the existing site and its surroundings, a study of the landscape and visual characteristics of the development and an assessment of the residual landscape and visual effects likely to be generated after mitigation has been considered and their significance.
- 10.132 It is concluded that there would be no significant landscape or visual effects as a result of the proposed development.
- 10.133 The landscape effects upon the existing large-scale, rolling arable field and adjacent roadside verge of the application site during short-term operational phases include:
- moderate and adverse physical changes to landscape elements and features associated with site clearance and preparation of the hardstanding and access, followed by installation and removal of various structures (rig, tanks, generators, cabins, etc.); and
  - moderate and adverse changes to aesthetic and perceptual aspects relating to the reduction in scale, increase in enclosure and diversity, with a more organised pattern of the site layout with vertical forms and new colours and reduction of tranquillity.
- 10.134 However, the effects upon overall character and key characteristics of this part of “Sherwood” (both “Sandstone Estatelands” and/or “Policy Zone 40: Babworth”) would be slight as the published character area is relatively large



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in comparison to the application site and the scale of change is limited; the character area would continue to be described as a large-scale gently sloping topography, arable and grassland fields, low-cut hawthorn hedges and wooded skylines, even though the development would introduce a small area of construction and drilling works, with associated fencing, hardstanding and rig, which would be no more than a locally detracting element.

- 10.135 The landscape effects would be adverse in nature but, after decommissioning and final restoration had been completed, would become negligible to slight and beneficial as the site is returned to arable use and any hedgerow management and tree planting is retained on a permanent basis.
- 10.136 The visibility of the application site is influenced at a local level by the topography and screening effects of vegetation in the surrounding area, in particular along roadsides and around properties.
- 10.137 The drilling rig would be the most visible feature, appearing as a relatively narrow and tall industrial element, often adjacent to the existing overhead powerlines that pass close by the western boundary of the site, and a small part of a broader horizontal skyline. The lower parts of the development (for example the perimeter fencing or tanks) would typically be much less visible, being confined principally to a 1-2km section of the A634 which passes by the site. At other locations, the lower parts of the development would be screened and/or set down on the horizon and/or backgrounded.
- 10.138 The short duration of time that the development may be visible also limits the overall effects, with the rig being limited to four months and then the perimeter fencing, gates and soil bund, etc. during construction, drilling and then the retention period still being less than three years. After final restoration there would be no change to views.
- 10.139 Short term effects relating to artificial lighting are also predicted to be limited, as the lux levels would meet the requirements of an existing rural / low district brightness situation. Although the linear fluorescent luminaires on the rig may contribute to sky glow, this is not considered to result in potentially significant landscape and visual effects due to their temporary and short term nature. In relation to the nearby residential properties, it is also confirmed that, due to distance, the illuminance values would present no issue to the residents.
- 10.140 Although there are several sensitive visual receptors in the study area (mainly of a residential or recreational nature), most of the changes during the operational phases would be no more than moderate; change would be discernible but the underlying landscape character or view composition would be similar to baseline.