COTMOOR SOLAR FARM, NOTTINGHAMSHIRE

Landscape & Visual Impact Assessment

PREPARED BY PEGASUS GROUP ON BEHALF OF JBM SOLAR PROJECTS 6 LTD | JULY 2020 | P18-2917_19A





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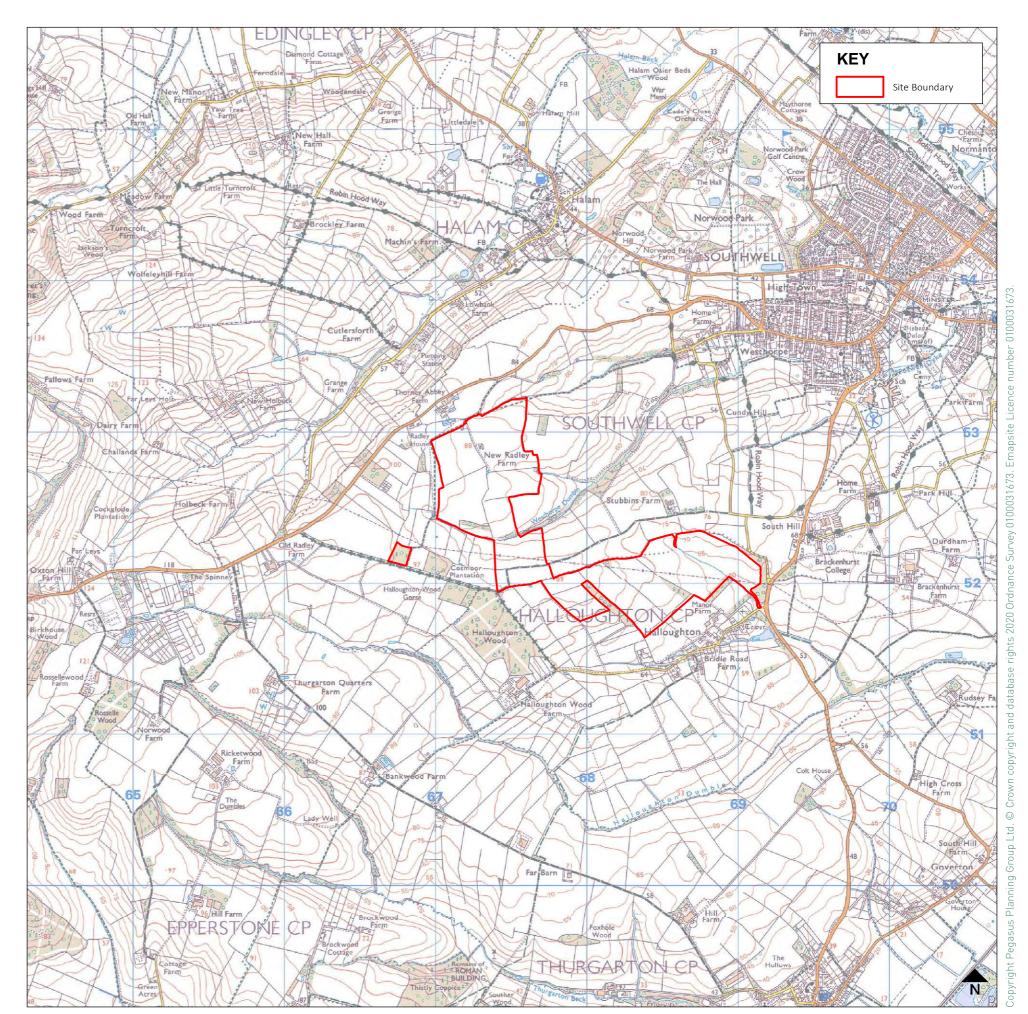
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1.0 INTRODUCTION

- 1.1 This Landscape and Visual Impact Assessment (LVIA) has been prepared by Pegasus Group on behalf of JBM Solar Projects 6 Ltd ("the Applicant") in support of the accompanying planning application for the installation and operation of a solar farm and together with associated equipment and infrastructure on Land near to Halloughton, Southwell, Nottinghamshire ("the Site"). The Site boundary is shown on **Figure 1: Site Location Plan**.
- 1.2 This report describes the existing landscape of the site in its wider surroundings and considers any potential effects of the Proposed Development upon:
 - Landscape features.
 - Landscape character; and
 - Visual amenity.
- 1.3 The main objectives of the LVIA are as follows:
 - To identify, evaluate and describe the current landscape character of the Site and its surroundings, and also any notable individual landscape elements and features within the Site.
 - To determine the sensitivity of the landscape to the type of development proposed.
 - To identify potential visual receptors (i.e. people who would be able to see the development) and evaluate their sensitivity to the type of changes proposed.
 - To identify and describe any effects of the development in so far as they affect the landscape and/or views of it and to evaluate the magnitude of change due to these effects.
 - To determine the degree (significance) of both landscape and visual effects.
- 1.4 The Site comprises two main elements: the main Site compound which would contain the solar panels, associated technical infrastructure such as inverters and CCTV cameras; and secondly, the proposed access track. This assessment principally focuses on the potential landscape and visual effects of the main Site compound rather than those in relation to the intermittent use of the access track. The Proposed Development is described in detail in Section 6 of this report, (refer to Site Layout).
- 1.5 A visit to the Site and the surrounding area was carried out in August 2019 to verify the findings of the desk-based review and to determine the extent of the visual influence of the Site.

Figure 1: Site Location Plan

Scale: 1:25,000 @ A3



METHODOLOGY

- The LVIA has been undertaken with regard to the following best practice:
 - Guidelines for Landscape and Visual Impact Assessment (3rd edition) - Landscape Institute/ Institute of Environmental Management and Assessment (2013);
 - GLVIA3 Statement of Clarification 1/13, 2/13, 1/14, and 2/14 -Landscape Institute;
 - An Approach to Landscape Character Assessment Natural England, October 2014; and
 - An approach to landscape sensitivity assessment to inform spatial planning and land management, June 2019.
 - New guidance on photography and visualisation: the Visual Representation of Development Proposals, Technical Guidance Note 06/19, 17 September 2019.
- 2.2 In accordance with the published guidance, landscape (elements and character) and visual impacts are assessed separately. The detailed methodology is outlined in **Appendix 1**.
- A preliminary study area has been defied as 3km radii from the Site's boundaries. Following the desktop studies and site visit it transpired that a more focused approach was required with the visual assessment concentrating on the immediate areas around the Site. This reflects the presence of vegetative screening, visual barriers such as major highways and associated tree cover, and visual context. This is further explained in Section 9 of this LVIA.

Nature of Effect

- The degree of landscape or visual effect is identified by means of a descriptive scale as per the GLVIA 3rd Edition guidance. However, it is also necessary to consider the nature of the landscape and visual effects. GLVIA 3 assists on this point noting:
- Concerning landscape effects paragraph 5.37 states that:
 - "One of the more challenging issues is deciding whether the landscape effects should be categorised as positive or negative. It is also possible for effects to be neutral in their consequences for the landscape. An informed professional judgement should be made about this and the criteria used in reaching the judgement should be clearly stated. They might include, but should not be restricted to:
 - The degree to which the proposal fits with existing character
 - The contribution to the landscape that the development may make its own right, usually by virtue of good design, even if it is in contrast to existing character.

The importance of perceptions of landscape is emphasised by the European Landscape Convention, and others may of course hold different opinions on whether the effects are positive or negative, but this is not a reason to avoid making this judgement, which will ultimately be weighed against the opinions of others in the decision making process."

PLANNING POLICY CONTEXT

National and local planning policy is considered in detail in the Planning Statement that accompanies the planning application for the Proposed Development.

Local Planning Policy

The current development plan for Newark and Sherwood comprises the: Core Strategy (adopted March 2019) and; Allocations & Development Management Development Plan Document (adopted July 2013). The Allocations & Development Management Development Plan Document does not have any specific policies that would relate to solar farm developments.

Newark & Sherwood Adopted Core Strategy

3.3 Spatial Policy 3 relates to rural areas and states that:

"The rural economy will be supported by encouraging tourism, rural diversification, and by supporting appropriate agricultural and forestry development. The countryside will be protected and schemes to enhance heritage assets, to increase biodiversity, enhance the landscape and, in the right locations, increase woodland cover will be encouraged.

- ... Character new development should not have a detrimental impact on the character of the location or its landscape setting."
- 3.4 Spatial Policy 13 relates to landscape character and states that:

"New development which positively addresses the implications of relevant landscape Policy Zone(s) that is consistent with the landscape conservation and enhancement aims for the area(s) ensuring that landscapes, including valued landscapes, have been protected and enhanced."

3.5 Core Policy 10 relates to climate change and states that:

"The District Council is committed to tackling the causes and impacts of climate change and to delivering a reduction in the Districts carbon footprint. The District Council will work with partners and developers to:

Promote energy generation from renewable and low-carbon sources, including community-led schemes, through supporting new development where it is able to demonstrate that its adverse impacts have been satisfactorily addressed..."

4 EXISTING CONTEXT

Site Description

- 4.1 The Site is located within the district of Newark and Sherwood, within the County of Nottinghamshire. As shown on Figure 1: Site Location Plan and occupies a series broadly rectangular fields that are currently in use for agriculture, to the north of Halloughton.
- 4.2 A single line of high voltage electricity transmission line crosses the Site on a board east-west axis, and a single line of telegraph poles cross the far eastern extent of the Site.
- 4.3 There are two Public Right of Ways within the Site boundary, footpath 209/43/1 is located in the far northern extent of the Site, situated adjacent to part of the northern boundary. Bridleway 209/74/1 crosses the central portion of the Site, between Halloughton Wood and Stubbins Farm in the
- 4.4 The boundary of the Site is Site is largely formed of hedgerow which in places in reinforced with hedgerow trees. The far eastern extent of the Site is contained by an area of plantation woodland situated adjacent to Stubbin's Lane. Linear belts of planation woodland also form the Site boundaries to the north of Halloughton. Internally within the Site, hedgerow boundaries are generally well established, intact and well defined and formed of hedgerow vegetation including a scattering of hedgerow trees. Westhorpe Dumble crosses the central portion of the Site on a broad east-west orientation, its route lined by riparian vegetation which includes a large quantity of trees.
- 4.5 The topography of the Site slopes gradually from a high point of approximately 93m Above Ordnance Datum (AOD) in the far northwest corner of the Site to 57m AOD near to the proposed Site access, in the south eastern corner of the Site. The fields either side of the Westhorpe Dumble slope gently towards the watercourse.
- 4.6 New Radley Farm is situated within the northern extent of the Site; however, it is excluded from within the Site boundary. The farmhouse is set within woodland and surrounded to the north, east and south.

Surrounding Area

Land Use and Field Pattern

4.7 The predominate land use surrounding the Site is agricultural. Field boundaries are predominantly formed by hedgerows, which often contain a scattering of hedgerow trees. In places, small scale watercourses lined by riparian vegetation delineate field boundaries. Belt and blocks of woodland also break up the generally medium sized geometric fields.

Public Highways

4.8 The settlement of Halloughton is located along a single road which passes through the length of the settlement, before terminating near Halloughton Wood Farm. The A612 Nottingham Road connects Halloughton to Southwell and continues towards Newark. Other roads which confluence in the Southwell include: the B6386 Oxton Road, Lower Kirklington Road and, Hockerton Road. The A617 bypasses Southwell and connects Mansfield and Newark. Beyond the main roads, smaller local roads provide a comprehensive network across the surrounding landscape.

Settlements, Built Form and Infrastructure

- 4.9 Halloughton located to the south is the closest settlement to the Site and is linear in form. The largest settlement in the local vicinity of the Site is Southwell, located to the northeast. Across the wider landscape the settlement of Newark-on-Trent is located approximately 10km to the east of the Site.
- 4.10 Outside of the main settlement boundaries there are a number of isolated individual properties and farmsteads scattered across the landscape.
- 4.11 The high voltage electricity lines mounted on pylons that cross the Site are part of a much larger network that cross the vale landscape to the south of Southwell.
- 4.12 A number of isolated properties are located in close proximity to the application boundary including; New Radley Farm and Stubbins Farm. Manor Farm, located on the northern edge of Halloughton and Halloughton Wood Farm located to the southwest approximately 120m and 610m from the Site respectively.

Topography and Watercourses

- 2.6 The Site is situated within a gently sloping landscape, which is part of a wide vale landscape as illustrated at **Figure 2: Topography Plan**. The overall pattern of the topography beyond the Site falls away to the east towards Southwell which is situated at approximately 40-50m AOD and adjacent to the River Greet which is located at approximately 25m AOD. To the southeast of the Site, the landform slopes gently towards the River Trent, which flows on a northeast-southwest orientation towards Newark on Trent within a wide shallow valley at approximately 20m AOD.
- 4.1 Beyond the Site, small scale watercourses, such as brooks and dykes occasionally form field boundaries.

Designations

4.2 The Site lies outside of any statutory or local/non-statutory landscape designations at either the local or national level such as: National Parks; Areas of Outstanding Natural Beauty (AONB) and; Special Landscape Areas (SLAs).

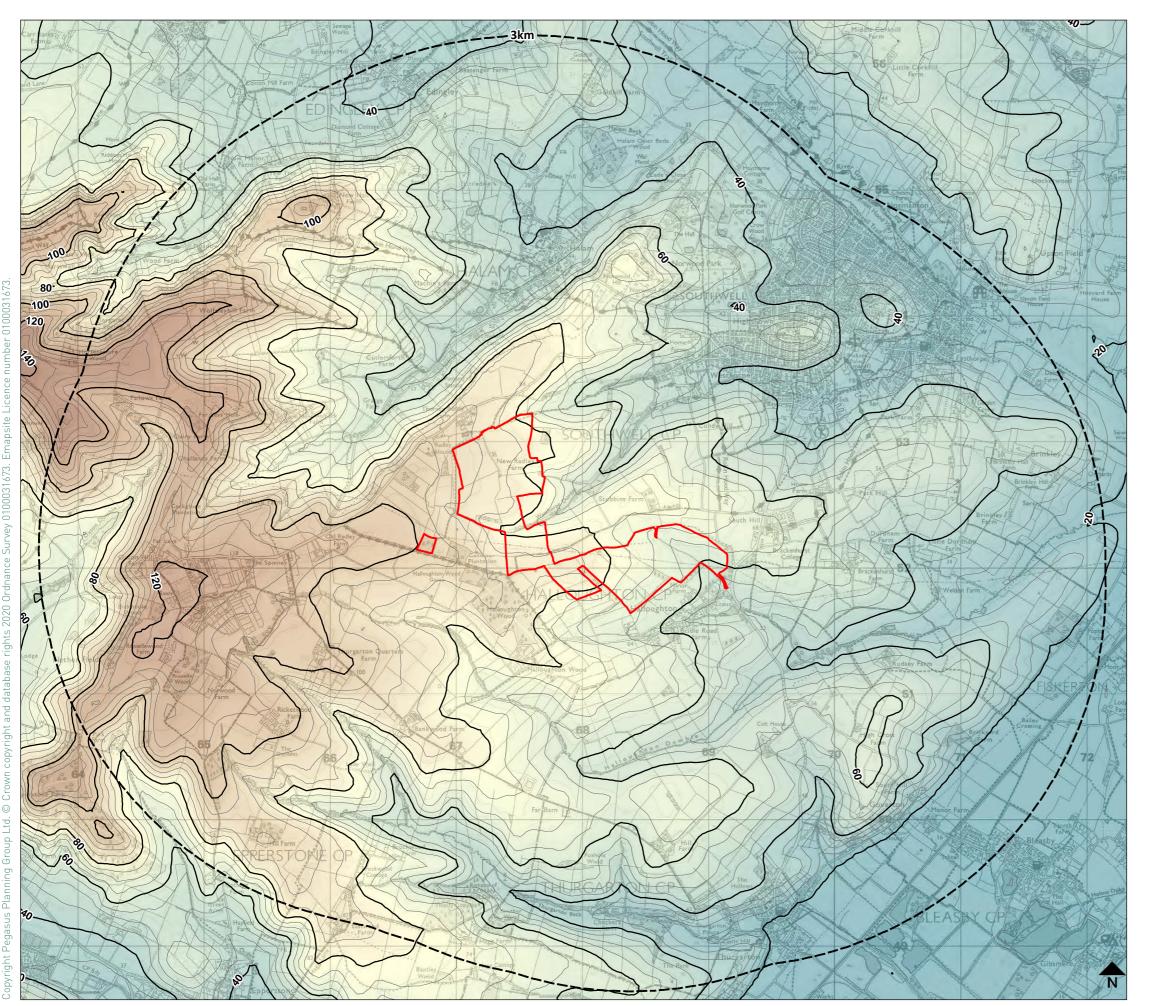
4.3 With regard to nearby designations, a Conservation Area is located within Halloughton which includes four Grade II and one Grade II* Listed Buildings. Further Grade II Listed Buildings are located to the east. Southwell to the north-east of the parcels contains a large Conservation Area and numerous Listed Buildings.

Public Rights of Way

- 186/9/1 passes along the eastern edge of Halloughton Wood and travels in a westerly orientation towards Old Radley Farm on the B6386 Oxton Road. PRoW footpath 209/43/2 runs from the B6386 Oxton Road towards the northern edge of the Site, before connecting with PRoW footpath 209/42/1 which continues in a southerly direction before connecting to PRoW Byway 186/9/1 near Cotmoor plantation, and to PRoW footpath 209/43/1 which is located within the far northern extent of the Site and continues in an easterly direction towards Southwell. PRoW footpath 209/74/1 that crosses the central portion of the Site, continues past Stubbins Farm towards Cundy Hill (road). The Robin Hood Way Long Distance Footpath travels alongside the River Greet before passing through Southwell and continuing to circle the landscape to the south of Southwell.
- 4.5 Beyond the settlement boundaries, a comprehensive network of PRoWs, which include footpaths, bridleways and byways cross the surrounding landscape.

Trees, Woodlands and Hedgerows

- 4.6 Within close proximity to the Site there are a number of small to medium scale blocks of woodland. Halloughton Wood located to the southwest of the Site is classified as Ancient Replanted Woodland. Belts of woodland are situated adjacent to sections of the Site boundary; lines of trees often line the routes of watercourses. Well established hedgerows, which are often reinforced by trees delineate field boundaries and also occur alongside roads.
- 4.7 The periphery of settlements in the local area, including Halloughton and Southwell are often comprised of vegetation in the form of curtilage vegetation such as shrubbery and trees and well established field boundary vegetation.



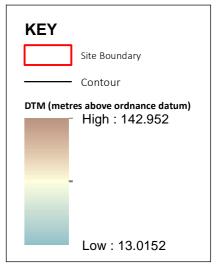
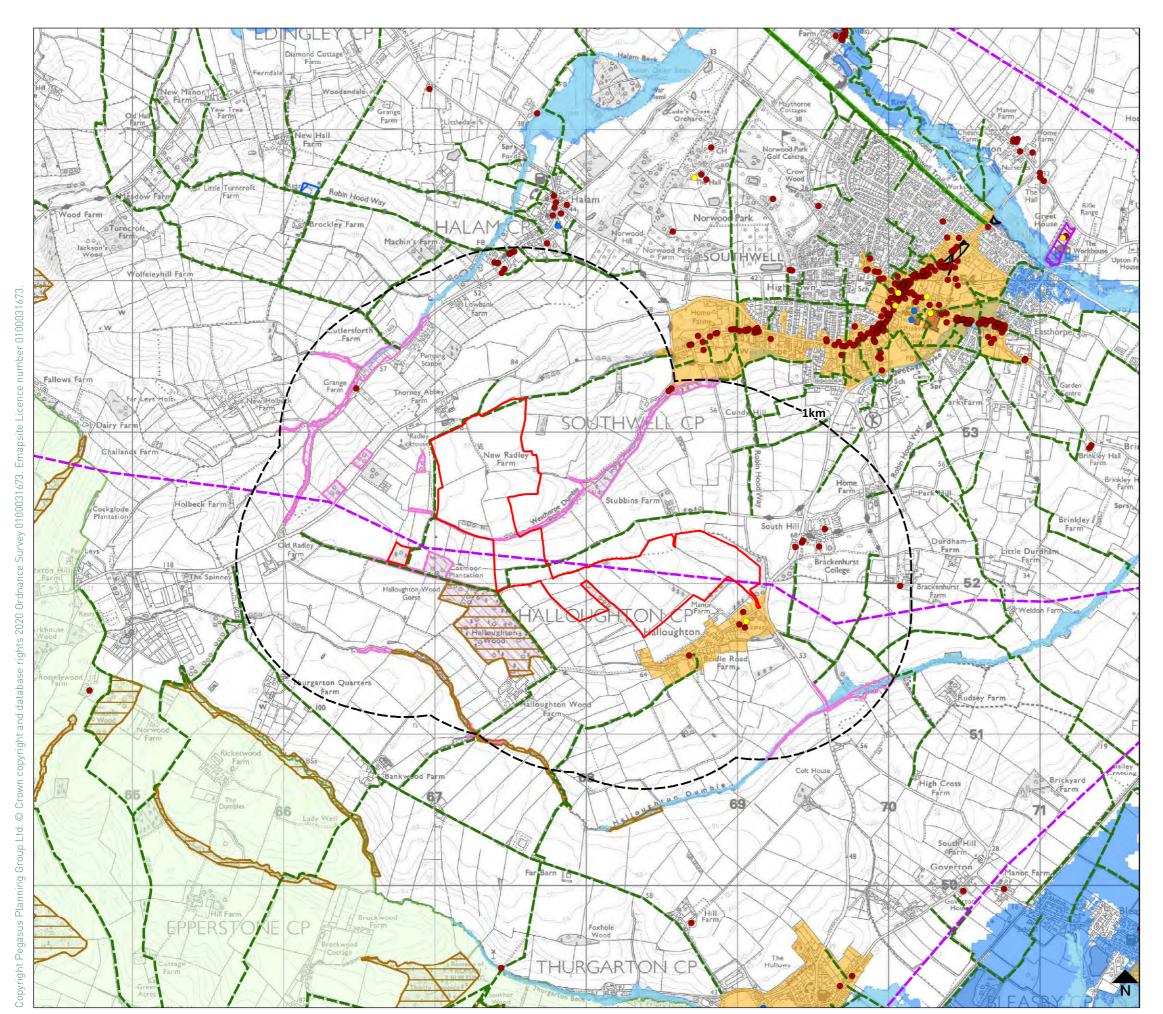


Figure 2: Topography Plan

Scale: 1:30,000 @ A3



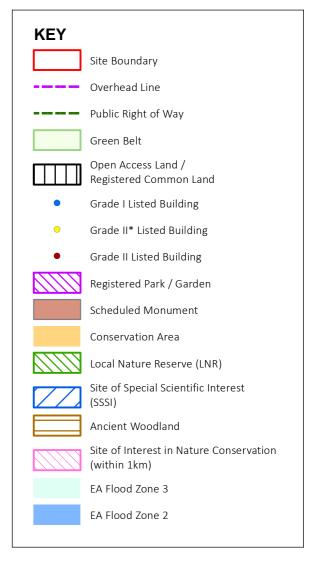


Figure 3: Environmental Designations Plan

Scale: 1:25,000 @ A3

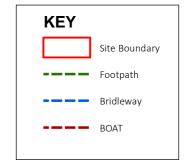


Figure 4: Public Rights of Way Plan

Scale: 1:30,000 @ A3

National Landscape Character

- 5.1 The Site is located within National Character Area (NCA) 48: Trent and Belvoir Vale. The southern and eastern edges of the NCA are well defined by the adjoining escarpments of the Northern Lincolnshire Edge with Coversands, the Southern Lincolnshire Edge and the Leicestershire and Nottinghamshire Wolds NCAs. The escarpment of the broad ridge of rolling landscape defines the boundary between NCA 48 and the neighbouring Sherwood and Humberhead Levels NCAs to the north and east.
- 5.2 Key characteristics considered relevant to this assessment include:
 - "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...
 - 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.
 - 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 gasfired power station and sugar beet factory near Newark, albeit on a slightly smaller scale."
- 5.3 Landscape opportunities listed which are considered relevant to the Site and the Proposed Development include to:
 - "Restore and manage hedgerows, where they have been lost, to strengthen the historical field patterns, improve wildlife networks and enhance landscape character.
 - Enhance tree cover throughout the NCA following the
 recommendations of the East Midlands Woodland Opportunity
 Mapping Guidance for each of the sub areas within the NCA
 through, for example, extensive planting of hedgerow trees. This
 is particularly important in view of the threat from ash dieback
 disease as ash is a characteristic species in the NCA. Protect
 and enhance the sinuous belts of trees and riparian habitats

that demarcate watercourses, create new woodland on former sand and gravel extraction sites, and extend and link up existing ancient woodland sites. Plan for a landscape depleted of ash by planting replacement hedgerow tree species such as oak which is also characteristic of the area."

East Midlands Regional Landscape Character Assessment

- 5.4 The East Midlands Regional Landscape Character Assessment (EMRLCA), published in April 2010 identifies that the Site is located within Regional Landscape Character Type (RLCT) 5b: Wooded Village Farmlands.
- 5.5 Key characteristics of the 5b: Wooded Village Farmlands are listed as:
 - "Varied topography, ranging from gently undulating farmlands to rolling hills, becks and steep sided valleys, locally known as 'Dumbles';
 - Scattered farm woodlands, ancient woodlands on prominent hills and tree lined valleys contribute to a well wooded character;
 - Well maintained pattern of hedged fields enclosing pasture and arable fields, with evidence of decline close to urban areas;
 - Sparsely settled, with traditional pattern of farms and small rural villages linked by quiet country lanes; and
 - Strong sense of landscape history."
- The description of RLCT 5b: Wooded Village Farmlands includes a review of baseline conditions under three main themes and includes the physical (geology and soils, landform, hydrology, land use and land cover, woodland and trees), cultural (buildings and settlement, heritage features, boundaries, communications, infrastructure and recreation) and perceptual (tranquillity, remoteness) attributes of the landscape that combine to create its unique character.
- 5.7 Aesthetic and perceptual qualities of the RLCT are identified as:

"Where field patterns remain intact, and local villages have seen limited late 20th century growth and development, the landscape retains a strong historic character, with tangible evidence of land use and settlement stretching back into the medieval period. Of particular significance are the ancient woodlands, organic field patterns and winding rural lanes between long established villages and hamlets...

Undulating landform and woodlands generally combine to create visual containment and sense of enclosure. Despite this, some panoramic and extensive views are possible from elevated locations where views are uninterrupted by intervening vegetation.

The landscape has a strong agricultural character, with wide areas retaining a sense of rural tranquillity and intactness, notably where ancient hedgerow patterns, woodlands and winding rural lanes have seen little modernisation. In some areas, and notably on the fringes of towns, or where agricultural regimes are shifting towards intensive

- arable production, gappy hedgerows and peri-urban land uses creates a sense that landscape quality is declining."
- .8 Additional information is presented on landscape change and management, highlighting the key forces for change acting on the landscape and broad guidance on shaping the future landscape.
- 5.9 An aim considered relevant to the Site and the Proposed Development as identified within guidance for shaping the future landscape is to:
 - "...protect existing rural landscape features, whilst encouraging positive management of those features lost or under threat. The restoration of hedgerows should be given priority, along with an increase in pasture, creating a stronger and more mixed pattern of land use. This will be particularly beneficial along watercourses, enhancing their visibility and creating a more integrated habitat network."

Newark and Sherwood Landscape Character Assessment

- 5.10 The Landscape Character Assessment Supplementary Planning Document (LCA SPD) was adopted on the 11th December 2013. At a county level, Regional Character Areas (RCAs) have been defined by Nottinghamshire County Council, the Site is located within the Mid-Nottinghamshire Farmlands region. The Mid-Nottinghamshire Farmlands RCA is then further subdivided in to six distinct Landscape Character Types (LCT), at this finer level of study, the Site is located within both the Village Farmlands with Ancient Woodlands and Village Farmlands LCT. At the finest level of study, the LCA identifies a series the Site as being located within Landscape Policy Zones (LPZ) 37: Halam Village Farmlands with Ancient Woodlands and; 38: Halloughton Village Farmlands.
- 5.11 The Village Farmlands with Ancient Woodlands LCT is described as:

"The Village Farmlands with Ancient Woodlands has a distinctively well-wooded, enclosed rural character where arable cultivation is the dominant land use and settlements are typically nucleated villages of traditional style or isolated farmsteads.

Landform is often a distinctive feature, allowing middle distance views of wooded horizons over the gently undulating farmlands. The pattern of hedged fields and woodlands is the principal visual elements of the landscape and helps to define the character of the Wooded Farmlands. The woodlands are small to medium in size and are distributed throughout the area, particularly on hill tops and rising ground. Deciduous and mixed woodlands dominate. A special feature of the area is the large number of ancient woodlands...

The field pattern is still intact and well-defined, although it has been eroded in places, leading, in some areas, to the feeling of enclosure giving way to a more open character. Hedges enclosing the large arable fields are generally intensively managed and therefore short and gappy. Hedges around the smaller, pasture fields tend to be

less intensively managed and are often important visual features. Ancient hedgerows are scattered throughout, usually along roadsides, green lanes or close to ancient woodland sites. There is a variable distribution of hedgerow trees, which can be dominant in some areas and more sparsely distributed in others. Ash and oak are the species most commonly found.

...Streams traverse much of the area and are often lined with willow, ash, alder and hawthorn, giving them significance in the landscape. Some of the riparian willows are old pollards...

...Isolated red brick and pantile farmsteads are also a feature throughout. The settlements are linked by a network of roads and rural lanes. The traditional settlements and country lanes add to the overall rural character of the landscape.

The Wooded Farmlands are a remote rural area that has been relatively unaffected by urban and industrial development. Probably most intrusive are the lines of pylons which dominate some areas..."

- 5.12 The Village Farmlands with Ancient Woodlands LCT has the following characteristic features:
 - "Varied undulating topography
 - Ancient woodlands, often prominently sited on hill tops
 - Well-defined pattern of hedged fields
 - Streams defined by lines of trees and permanent pasture
 - Traditional pattern of farms and small rural villages
 - Red brick buildings with pantile roofs
 - Quiet country lanes
 - Small remnant orchards and permanent pastures around villages."
- 5.13 The Village Farmlands LTC is described as:

"The Village Farmlands are dominated by a simple pattern of large arable fields and nucleated village settlement. Other key features include hedgerow trees, small woods and tree-lined streams.

The character of the Village Farmlands is almost completely dominated by arable farming. This is reflected by the pattern of large fields which are enclosed by low, intensively managed hedgerows. Despite intensive management the field pattern remains the most visually important feature in the landscape. Hedges are usually hawthorn but a few species-rich hedgerows do occur. Hedgerow trees are scattered ash and oak which have a localised significance.

Woodlands are small, usually deciduous and occur infrequently. Where they do occur they are of local importance. Perhaps more frequent are the becks that drain the area towards the Trent, examples of which are North Beck and Lee Beck. Where these are tree-lined they enjoy some prominence in otherwise open landscapes. Ash, willow and hawthorn are common beckside species.

Industrial influences are present in this landscape but are localised."

- 5.14 The Village Farmlands LTC has the following characteristic features:
 - "Gently rolling topography
 - Simple pattern of large arable fields
 - Nucleated settlement pattern of villages and isolated farmsteads
 - Small-scale pastoral landscapes and remnant orchards around settlements
 - Lines of willow and other riparian trees along streams
 - Open views to the Trent Valley, power stations and pylons."
- 5.15 At the finest level of study, the northern portion of the Site is located partially within Policy Zone (MN PZ) 37: Halam Village Farmlands with Ancient Woodlands.
- 5.16 Under the heading landscape analysis, the landscape condition is defined as "very good", and goes on to state that:

"The area has a unified pattern of elements composed of arable fields, blocks of deciduous woodland and isolated farms; there are few detracting features including a section of pylon line and a caravan park. Overall this gives a visually strongly unified area."

- 5.17 Characteristic visual features are listed as:
 - "Very gently undulating and rounded topography.
 - Medium distance views to frequently wooded skylines, although often enclosed by vegetation - hedgerows, woodland etc.
 - Mixture of intensive arable fields with strongly trimmed hedges and some low intensity farming with permanent improved pasture."
- 5.18 The landscape sensitivity is defined as "high", the description goes on to state that:

"The components of the landscape are characteristic to the Mid Nottinghamshire LCA. The time depth is historic (post 1600) giving a moderate sense of place overall.

The landform is dominant with intermittent areas of woodland giving a generally high visibility value within the Policy Zone. Views are intermittent due to numerous blocks of woodland and hedgerows. A moderate sense of place and high visibility leads to a high landscape sensitivity overall."

- 5.19 The landscape actions for the policy zone are identified as "conserve", and include to:
 - "Conserve hedgerows and prevent fragmentation (through lack of management and intensification of arable farming).
 - Conserve historic field pattern by containing and limiting any new development within historic enclosed boundaries.
 - Conserve the ecological diversity and setting of the designated SINCs.
 - Conserve and enhance tree cover and landscape planting

generally to improve visual unity and habitat across the Policy Zone."

- 5.20 At the finest level of study, the southern portion of the Site is located within Policy Zone (MN PZ) 38: Halloughton Village Farmlands.
- 5.21 Under the heading landscape analysis, the landscape condition is defined as "good", and goes on to state that:

"The area has a unified pattern of elements composed of arable fields, blocks of deciduous woodland and isolated farms; there are few detracting features including a section of pylon line and a caravan park. Overall this gives a visually strongly unified area"

- 5.22 Characteristic visual features are listed as:
 - "Very gently undulating and rounded topography.
 - Medium distance views to frequently wooded skylines, although often enclosed by vegetation - hedgerows, woodland etc.
 - Mixture of intensive arable fields with strongly trimmed hedges and some low intensity farming with permanent improved pasture.
 - Small commercial agriculture Mushroom Farm, Strawberry Poly-tunnels.
 - Small industrial estate
 - Leisure facilities surrounding Southwell Golf Course, Horsey culture, Sports Fields."
- 5.23 The landscape sensitivity is defined as "moderate" the description goes on to state that:

"The components of the landscape are characteristic to the Mid Nottinghamshire LCA. The time depth is historic (post 1600) giving a moderate sense of place overall.

The landform is apparent with intermittent areas of woodland giving a generally moderate visibility value within the Policy Zone. Views are intermittent due to numerous blocks of woodland and hedgerows. A moderate sense of place and moderate visibility leads to a moderate landscape sensitivity overall."

- 5.24 The landscape actions for the policy zone are to listed as to "conserve and reinforce", and include to:
 - "Conserve and reinforce hedgerows where these are gappy and in poor condition, particularly internal hedgerows. Seek opportunities to restore the historic field pattern/boundaries where these have been lost and introduce more hedgerow trees. Reinforce with new planting to replace post and wire fencing.
 - Conserve and Reinforce the ecological diversity of Norwood Park and other designated SINCs where appropriate.
 - Ensure that new planting takes into consideration the medium and longer views across the shallow ridgelines around Southwell which allow views across to the Minster and landscape beyond."

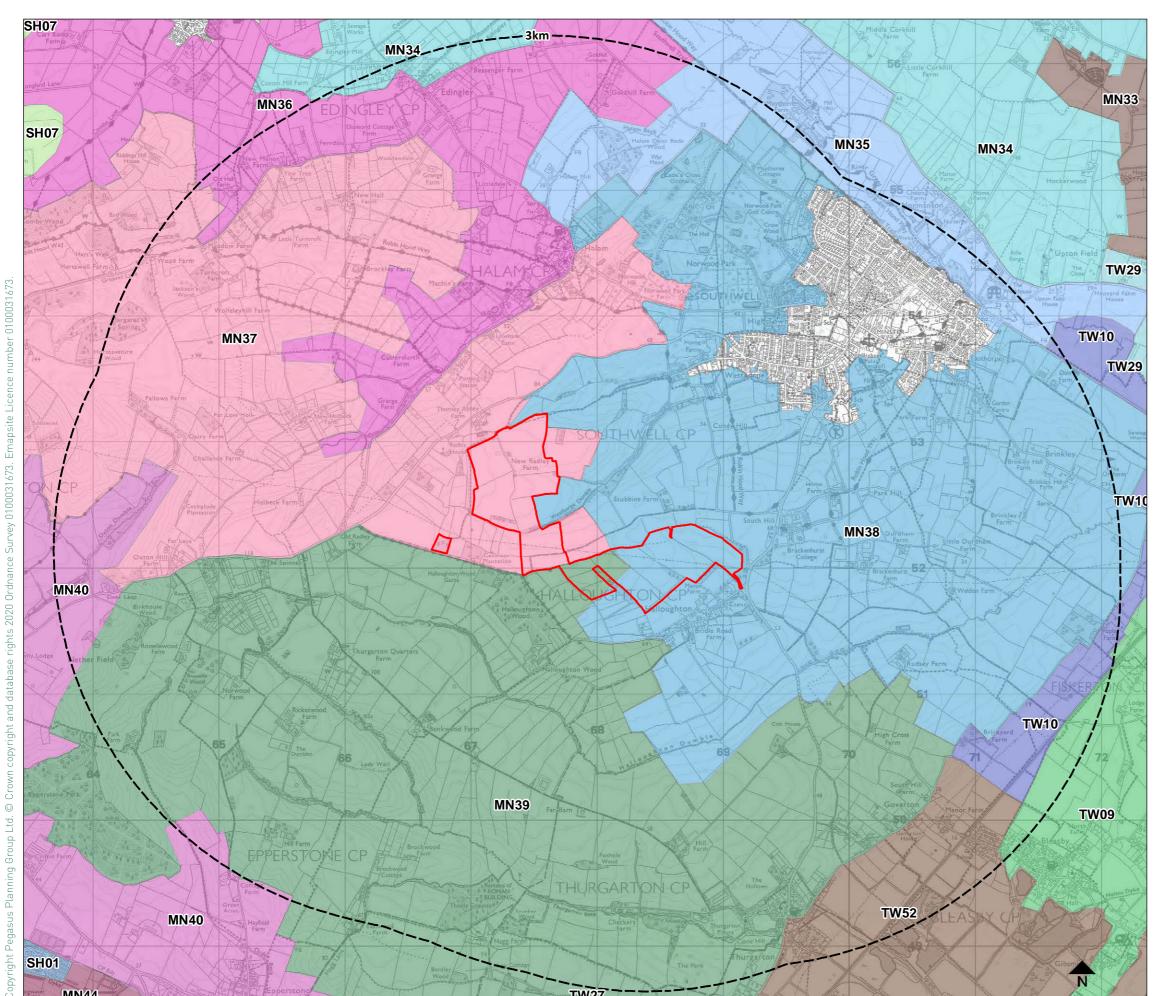




Figure 5: Landscape Character Areas Plan

Scale: 1:30,000 @ A3

6 DESCRIPTION OF THE PROPOSED DEVELOPMENT



EFFECTS OF LANDSCAPE FEATURES

Within this section of the LVIA, it is acknowledged that any effects upon the character and features of the local landscape due to the construction and operation of the proposals would be reversible in nature. The effects of the operational phase, however, would be long term. This has been taken into consideration in the judgements regarding magnitude of landscape effects.

Topography

- The subtly variations in topography across the Site is a typical of the wider vale landscape within which the Site is located. Therefore, its Value as a landscape element is considered Low. The Susceptibility of landform to the type of Development Proposed is also Low, as it is anticipated that there would be minimal excavations and regrading needed during the construction phase. The Sensitivity of the landform within the Site is Low.
- Due to the nature of the Proposed Development, the prevailing topography and the perception of the landform would still be experienced as the arrangement of the solar panels would follow the subtle changes in the contours and thus reflecting the topography of the Site.
- Some ground disturbance would occur during the trenching for the underground cabling, the foundations for the ancillary elements including the fencing and the installation of the temporary construction compound, however any changes would be very limited. These effects would be temporary with the ground levels in these areas reinstated and soil reseeded after the decommission of the solar farm. The Magnitude of Change is therefore assessed as Negligible resulting in Negligible effects across the Site.

Trees and Hedgerows

The boundaries of the Site are predominately bound by hedgerows, which in some places contains hedgerow trees and also plantation woodland. Well established hedgerows reinforced by hedgerow trees are the typical form of enclosure across the local landscape and are considered to be of Medium Value. The hedgerow resource is considered to be of Medium susceptibility to change reflecting the time needed for this type of landscape element to establish and mature. Overall, the Sensitivity of hedgerows as a landscape element is assessed as Medium. Areas of woodland are considered to be of high scenic value and have been identified as a key characteristic of the local landscape character. Trees and areas of woodland are considered to be of High Value and High Susceptibility due to the long time it takes to establish this type of landscape. The Sensitivity of trees and woodlands is judged to be High.

- The hedgerows which form the external boundary of the Site would be protected during the construction phase and as a consequence will remain unaffected by the Proposed Development. The photovoltaic panels will be offset from the existing boundary vegetation to provide a clear maintenance and access route, prevent overshadowing on the panels and also to protect their Root Protection Zone and canopies. As part of the Proposed Development the existing internal and external hedgerows would be enhanced to conserve hedgerow patterns which are a key characteristic of the local landscape character. Where gaps in the external field boundaries are present, they would be planted up with hedgerow species reflecting the local provenance, including hedgerow trees, to contribute to the well treed character of the local landscape and to provide habitat connectivity. To accommodate the access tracks limited areas of vegetation may need to be removed, however the proposed planting is expected to outweigh the removal of this small amount of vegetation resulting in a Low Beneficial Magnitude of Change on existing hedgerows and trees within the Site.
- With a Low Beneficial Magnitude of Change and a Medium to High Sensitivity the Proposed Development would bring about a Minor to Moderate Beneficial Effect upon the hedgerow resource within the Site.

Land Cover

- At the time of the Site visit the Site was used for farming which is typical for the area and is therefore considered to be of Low Value and Low Susceptibility and Low Sensitivity to the changes proposed.
- Once the proposed solar panels have been installed the ground cover would change from farmland to a solar development set within species rich grassland that would be managed for biodiversity. The introduction of the Proposed Development would result in the removal of the current farmland, which would indicate a High Magnitude of Change. In terms of biodiversity, however, this would be considerably more advantageous, and this is further described in the ecology report. It is also worth reiterating that the proposed development can be described as long term in nature but temporary allowing the land to be effectively returned to its previous condition and use. On balance, the Magnitude of Change would be Medium considering the extent of the proposed areas of species rich grassland within the Site, such change would result in Minor Beneficial effects.



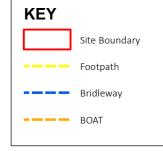


Figure 7: Landscape Features Plan

Scale: 1:10,000 @ A3

EFFECTS ON LANDSCAPE CHARACTER

The Site does not lie within any statutory or non-statutory/local landscape designation. It is an example of a rural landscape, located in relatively close proximity to a large town, Newark-on-Trent and as a result there are clear signs of human influence on the landscape, including actively managed farmland, high voltage transmission pylons, wind turbines and sites used for landfill, yet the rural nature of the landscape prevails which exhibits certain visual qualities in its own right, and as such the landscape is considered to be of Medium Value.

National and Landscape Character

- The Proposed Development would result in a loss of arable farmland which is contained by a well-established and in most places robust landscape framework. The Proposed Development would strengthen and restore the characteristic network of hedgerows, including hedgerow trees, in line with the landscape opportunities listed for NCA 48: Trent and Belvoir Vale.
- Comparing the scale of the Proposed Development and changes to the landscape features within the NCA, it is considered that the Proposed Development would have a Negligible Scale of Effect on the NCA as a whole. While it is acknowledged that there will be a change to the land use and character of the Site itself, the proposals would fit entirely within the existing established field boundary vegetation and the key characteristics of NCA 48: Trent and Belvoir Vale would remain and prevail.

Regional Landscape Character Assessment

- The East Midlands Regional Landscape Character Assessment identifies the Site is as being located entirely within 5b: Wooded Village Farmlands, which is described as an area with varied topography, scattered woodlands and a well maintained pattern of hedged fields.
- With the Proposed Development in situ, the perception of the undulating landform would still be perceived. A relevant guidance identified for the RCA is to: "protect existing rural landscape features, whilst encouraging positive management of those features lost or under threat. The restoration of hedgerows should be given priority, along with an increase in pasture, creating a stronger and more mixed pattern of land use. This will be particularly beneficial along watercourses, enhancing their visibility and creating a more integrated habitat network."
- On balance, whilst it is acknowledged whilst there would be a change in the land use within the Site as a result of the Proposed Development, the Landscape Proposals which comprise infilling, strengthening, restoring and creating new hedgerow boundaries is in line with the

landscape change and management guidance for the RCA. As a result, it is considered that the Proposed Development would have a Negligible Scale of Effect on the RCA as a whole.

Newark and Sherwood Landscape Character Assessment

- The Newark and Sherwood Landscape Character Assessment Site is located across two Landscape Character Types: Village Farmlands with Ancient Woodlands and; Village Farmlands LCT. At the finest level of study, the Site is located primarily within two Landscape Policy Zones, 37: Halam Village Farmlands with Ancient Woodlands and; 38: Halloughton Village Farmlands.
- With the Proposed Development in situ, the characteristic well-defined pattern of hedged fields, well-wooded, enclosed rural character of the Village Farmlands with Ancient Woodlands LCT and Landscape Policy Zones, 37: Halam Village Farmlands with Ancient Woodlands would be retained and enhanced, with the existing landscape framework of still being easily perceived within the local landscape.
- Due to the low lying nature of the proposals, the very gently sloping local topography the visual influence of the Proposed Development would be limited across the Village Farmlands LCT and Policy Zones 38: Halloughton Village Farmlands. As part of the proposals there is the opportunity to restore and create new hedgerows for both nature conservation and to provide a robust landscape framework within which the Proposed Development would be contained.
- Based on the analysis provided within The Landscape Character Assessment Supplementary Planning Document, Policy Zone 37: Halam Village Farmlands with Ancient Woodlands has been assessed as having a High Sensitivity. Whilst Policy Zone 38: Halloughton Village Farmlands has been assessed as having a Moderate Sensitivity. The Proposed Development is separated from the wider countryside by the existing framework of hedgerows which often include hedgerow trees. As illustrated on Figure 6: Site Layout and in line with guidelines outlined for both LCTs and Policy Zones within which the Site is located, there is the opportunity to enhance, restore and create native hedgerows. Field margins, grassland beneath the panels, and hedgerows would be also managed to increase the biodiversity on Site resulting in a beneficial change to the condition, quality and structure of the landscape on a local level. Due to the low lying nature of the proposals, key characteristics of the local landscape such as, views to wooded skylines could still be experienced with the Proposed Development in situ.

8.11 On that basis the Proposed Development would bring about a Low Magnitude of Change to the Site. With the High and Medium Sensitivity, the effects on the host local landscape character would be Minor Beneficial Effect on both the Village Farmlands LCT and Policy Zone Policy Zone 38: Halloughton Village Farmlands. For Village Farmlands with Ancient Woodlands and Policy Zone 37: Halam Village Farmlands with Ancient Woodlands the effects arising as part of the proposals are assessed as Moderate Beneficial.

EFFECTS ON VISUAL AMENITY

Representative Viewpoints

- For the purposes of this LVIA, a series of representative publicly accessible views from the area surrounding the Site have been identified through desk top and field studies. These Viewpoints are not intended to cover every possible view of the Proposed Development, but rather they are representative of a range of receptor types at varying distances and orientations to the Site.
- The effect on visual amenity considers the changes in views arising from the proposals in relation to visual receptors including residential properties, highways, PROW, and recreational areas; and the effect on representative Viewpoints. The Viewpoint locations are shown on the Viewpoint Location Plan at Figure 9.
- The construction stage would be of relatively short duration and although relevant any potential effects would be similar or lower to those identified during the long term operational phase of the Proposed Development. Therefore, this assessment focuses on the longer term operational stage of the proposals.

Zone of Theoretical Visibility

The Screened Zone of Theoretical Visibility (Figure 8) identifies the potential locations from which the development may be visible. The Screened Zone of Theoretical Visibility (SZTV) has been produced using Digital Terrain Modelling (DTM) data. Existing built development and larger blocks of woodland have also been modelled (at 8m and 15m tall respectively) to take account of the screening effect that these would provide. However, the screening effect provided by small blocks of woodland and hedgerows/hedgerow trees have not be taken into account, and consequently the actual extent of the area from which the proposed development is visible (the visual envelope) is likely to be much smaller.

General Visibility

The Site is on gently sloping land which falls gradually from a high point in the northwest corner to a low point in the south eastern extent of the Site, these subtle undulations in topography are characteristic of this vale landscape with subtle changes in topographical. These subtle changes in landform, the lack of vantage points from higher ground, in combination with: blocks of woodland plantation; roadside vegetation and; riparian vegetation along the Westhorpe Dumble, restrict and prevent views towards the Site.

Views from Public Rights of Way

- As part of the desktop research and Site assessment the nearby PRoW have been visited and investigated to confirm whether views of the Proposed Development can be experienced. PRoW routes across the surrounding landscape are relatively sparse and concentrated around settlements. Following the Site visit it transpired that views of the Proposed Development are restricted although the Screened ZTV indicates that some views may be theoretically gained from the local PRoW network. However, due to the gently undulating vale landscape across the Site and surrounding landscape, in combination with the existing intervening vegetation views of the Proposed Development from the local PRoW network are restricted.
- With regards to the Susceptibility of visual receptors along PRoW routes would be High as the surrounding area forms a strong component of their visual amenity. With the landscape being an example of a pleasant but undesignated countryside, it is considered to be of Medium Value, the Sensitivity of Visual receptors using the PRoW network would be High.
- From locations on the PRoW bridleway 209/74/1 to the west of the Site (as illustrated by Viewpoint 1), the Proposed Development would be situated beyond the hedgerow which includes hedgerow trees. As part of the development proposals an additional length of hedgerow is proposed alongside the PRoW bridleway within the Site. At Year 1, the existing vegetation and proposed vegetation is expected to partially filter views of the proposals, resulting in Medium Magnitude of Change at Year 1 and a Major Scale of Effect. By Year 10 once the proposed hedgerow vegetation has matured the Scale of Effect is expected to reduce to Negligible.
- Viewpoints 2,3,4 and 5 are a series of sequential views which are taken from along bridleway 209/74/1. Whilst PRoW users at Viewpoint 2 would experience a High Magnitude of Change at Year 1 and a Major Scale of Effect, due to the close proximity of their close proximity to the proposals. By Year 10 once the proposed on Site hedgerow adjacent to the PRoW has matured, the Scale of Effect is expected to reduce to Moderate or Negligible, especially during the summer months. As illustrated by Viewpoint 3, views towards the Proposed Development are restricted by well-established Site boundary hedgerows resulting in a Low Magnitude of Change, and a Moderate Scale of Effect when the vegetation is not in leaf during Year 1. By Year 10 as the boundary vegetation continues to mature and fill out, the Scale of Effect would reduce to Negligible.

- 9.10 Viewpoint 4 represents a transient and oblique view experience by PRoW users travelling along bridleway 209/74/1 near Stubbins Farm. At Year 1, with the Proposed Development in situ users of the bridleway would have the brief opportunity to experience a view through a gap in the field boundary vegetation towards the Site resulting in a Medium Magnitude of Change and a Major Scale of Effect. However, the view experienced would be filtered by existing boundary vegetation and would be of the rear of the panels, which would appear as a mass rather than individual lines of panels. However, due to the low lying nature of the proposals, views to the wooded horizon beyond the Site could still be experienced with the proposals in place. As illustrated by the accompanying Photomontage, once the proposed boundary vegetation has matured the Magnitude of Change is expected to reduce to Low or Negligible, resulting in a Moderate to Negligible Scale of Effect.
- 9.11 From locations further along bridleway 209/74/1 away from the Site, as illustrated by Viewpoint 5. The existing intervening boundary vegetation along part of the northern boundary of the Site includes dense belts of trees and well established hedgerows. Views of the Proposed Development would be restricted at Yea 1 and 10, resulting in a Negligible Magnitude of Change. The Robin Hood Way a Long Distance Footpath travels through Southwell and out towards Halam. Viewpoint 6 is taken from the slightly elevated position to the northeast of the Site, from along the Robin Hood Way and looks in a south-westerly orientation across the gently undulating landscape towards the Site. Intervening landform in combination with existing vegetation which includes trees, prevents views of the Proposed Development resulting in Negligible effects upon PRoW users at this location.

- 9.12 Viewpoint 10 is taken from PRoW bridleway 186/3/1 to the southwest of Halloughton and looks in a northerly orientation across the gently undulating agricultural landscape towards the Site, which would be situated towards the horizon of the view. Existing field boundary vegetation, which includes belts of trees are expected to screen much of the proposals, with only part of the southern extent of the Proposed Development visible at Year 1 resulting in a Low Magnitude of Change and Moderate Effect on PRoW users at this exact location. It is important to note that the typical view experienced from along this bridleway would be transient and oblique in nature, and from locations to the east views towards the Site are restricted by: vegetation situated adjacent to the bridleway; agricultural buildings and; residential properties within Halloughton. From locations to the west, views are restricted by intervening landform and field boundary vegetation. By Year 10 as illustrated by the Photomontage, once the proposed Site boundary vegetation has matured, the Magnitude of Change will have reduced to Negligible. But, importantly with the development in situ, the elements of the proposals would not be a dominate feature in the view. Nor are they expected to break the skyline.
- 9.13 Views from the PRoW network to the southwest of the Site are represented by Viewpoint 12, which is taken on the southernmost extent of Cotmoor Lane Byway. The gently sloping grassland fields in the foreground of the view are not located within the Site. A hedgerow located in the mid-view marks part if the Sites western boundary. A well-established tree belt situated to the north of Halloughton restricts views across the southern extent of the Site. At Year 1, with the Proposed Development in situ, it is anticipated that the upper parts of the proposals could be visible through the existing hedgerow resulting in a Low Magnitude and a Moderate Scale of Effect. By Year 10, as illustrated by the accompanying Photomontage, once the proposed boundary vegetation has matured the Magnitude of Change is expected to reduce to Negligible.
- 9.14 Views from the local PRoW network covering the landscape to the north of the Site are represented by Viewpoints 13, 14, 15 and 16. Viewpoint 13 is taken from footpath 209/42/1 which passes to the west of the Sites western boundary. Views from this location would be heavily filtered in the summer months, however in the winter when the hedgerow vegetation is not in leaf, footpath users could experience filtered views of the Proposed Development resulting in a Low Magnitude of Change at Year 1 and 10, resulting in a Moderate Scale of Effect. However, during the summer months or as the intervening hedgerow continues to mature the Magnitude of Change would reduce to Negligible.

- 9.15 The farmhouse at Radley Farm is situated towards within the northern extent of the Site, Viewpoint 14 is taken at the point where footpath 209/42/1 crosses the access track to Radley Farm, and looks in a southerly direction into the Site. The proposed development would be situated within the mid view, beyond the access track and existing hedgerow. Users of the footpath at this location have the opportunity to experience oblique, transient, and glimpsed views of the proposals as they travel along the footpath. It is anticipated that at Year 1 the Magnitude of Change would be assessed as Medium resulting in a Major Scale of Effect. At Year 10, as illustrated by the accompanying Photomontage, the Magnitude of Change is expected to reduce to Low or Negligible, which translates into a Moderate to Negligible Scale of Effect.
- 9.16 PRoW users along footpath 209/43/1 travelling through the Site are represented by Viewpoint 15 who would experience close up views, primarily of the security fencing the rear of the panels resulting in a High Magnitude of Change and Major Scale of Effect at both Years 1 and 10. At present for footpath users at the location of Viewpoint 15 do not currently have long ranging views across the landscape to the south due to the intervening undulating landform in the foreground. Footpath 209/43/1 continues in an easterly direction beyond the Site and across the landscape towards Southwell. Views to the east of the Site are represented by Viewpoint 16. The hedgerow in the foreground of the view marks the Site boundary and restricts views into the Site. It is anticipated that this dense hedgerow would heavily filter views of the Proposed Development at Years 1 and 10 resulting in a Low Magnitude of Change during the winter months and a subsequent Moderate Scale of Effect. However, the Magnitude of Change is expected to reduce to Negligible when the hedgerow vegetation is in leaf and over time as the hedgerow vegetation continues to mature.
- 9.17 Viewpoint 17 is taken just off the B6386 from along footpath 209/43/2, and looks in a south-westerly orientation towards the Site. Layers of intervening vegetation, including trees, are expected to restrict and prevent views of the Proposed Development resulting in a Negligible Magnitude of Change at Years 1 and 10, resulting in a Negligible Effects for footpath users at this exact location. From locations further along the footpath to the south, intervening vegetation is expected to heavily filter views of the proposals.
- 9.18 There is a comprehensive network of PRoWs to the north of the Site to the west of Halam. Viewpoint 18 is taken from along the Robin Hood Long Distance Footpath and looks in a south-easterly orientation across the undulating landscape towards the Site. The horizon of the view contains multiple belts and blocks of woodland. The intervening landform and vegetation would restrict views of the Proposed Development resulting in a Negligible Magnitude at both Year 1 and 10.

Views from Public Highways

- 9.19 The Susceptibility of road receptors would be Medium as the surrounding landscape is perceived in transition with a variety of landscape types perceived. With the landscape being an example of a pleasant but nondesignated countryside thus of Medium Value, the Sensitivity of visual receptors would be Medium.
- 9.20 A number of public highways were visited during the Site visit. Local roads are frequently lined on both sides along much of their length by a mix of hedgerow vegetation and in places tree. The proposals would have a limited to no influence upon the visual amenity experienced along much of the local road network.
- 9.21 Viewpoint 7 is representative of road users traveling along the unnamed road which runs between the A617, traveling north towards Southwell. Dense roadside vegetation in conjunction with a woodland plantation, which wraps around the eastern extent of the Site, restricts views of the Proposed Development resulting in Negligible effects at both Year 1 and 10.
- 9.22 Road users entering Halloughton from the east near St James' Church (as illustrated by Viewpoint 8) have the opportunity to experience views of the proposed Site access point resulting in a Low Magnitude of Change and Minor Scale of effect. Whilst the road users would be passing in close proximity to the proposed access point, post construction it is proposed that a traditional farm gate would be installed which would be in keeping with other farm gates in the vicinity of the Site. The security gate and security fencing would be set back from the road, obscured from view. The view experienced by road users would be oblique and transient, with the farm gate occupying a comparatively small section of the existing roadside hedgerow. The main elements of the Proposed Development such as the panels would be sent back from this location (by approximately 140ml and would screened from view.
- 9.23 Viewpoint 11 is taken on the western edge of Halloughton and looks in a northerly direction across the adjacent agricultural fields towards the Site. The Proposed Development would be situated in the mid view, beyond the intervening vegetation, which also screens the vast majority of the Site. At Year 1, before the proposed Site boundary vegetation has established the Magnitude of Change is assessed as Low resulting in a Minor Scale of Effect. By Year 10, once the proposed planting along the Site boundaries has matured the Magnitude of Change will have lowered to Negligible.

Views from within the churchyard of St James' Church

- 9.24 The Susceptibility of visitors to this rural cemetery (as illustrated by Viewpoint 9) is considered to be Medium as whilst the cemetery is in a rural setting, the focus of the visitors would likely be on the visiting a grave(s) rather than the wider countryside. The Value of the landscape is Medium as it is an example of a pleasant but non-designated countryside. The Sensitivity to visitors to the cemetery is assessed as Medium.
- 9.25 Views from within the churchyard towards the Site are filtered by both vegetation within the churchyard, which includes evergreen species, and field boundary vegetation. Whilst filtered views of the construction traffic may be experienced over a temporary period of time, the main elements of the Proposed Development such as the solar panels, security fencing and substation would be largely screened from view resulting in a Low Magnitude of Change at Year 1 and a Minor Scale of Effect, reducing to Negligible by Year 10. As previously mentioned, a traditional farm gate is to be placed at the Site entrance which would help to retain the agricultural character of the view beyond the church yard.

Views requested by Newark and Sherwood

- Following discussions with the Case Officer and Conservation Officer at Newark and Sherwood District Council, three additional viewpoints were recorded during the Site visit. These three viewpoints are included at Appendix 2 are: Appendix Viewpoint A, taken from near Brinkley Hall Farm; Appendix Viewpoint B taken from PRoW footpath 209/12/1 on the edge of Southwell Conservation Area and; Appendix Viewpoint C which is taken from within the grounds of Southwell Minster.
- 9.27 Appendix Viewpoint A is taken from Fiskerton Road near Brinkley Hall Farm. Dense, well-established roadside and field boundary vegetation restricts views across the adjacent landscape towards the Site. With the development in situ there would be a Negligible Magnitude of Change upon receptors at this location at Year 1 and 10. Views from within the grounds of the farm are expected to be restricted by vegetation along the boundary of the property.
- 9.28 Appendix Viewpoint B is taken from the Easthorpe end of the Southwell Conservation Area. The view looks across the gently sloping landscape to the south of Southwell towards the Site which is obscured from view by intervening landform. With the development in situ, the Magnitude of Change for Year 1 and 10 is assessed as Negligible which translates into Negligible Effects.

- Finally, Appendix Viewpoint C is taken from within the grounds of Southwell Minster, the boundary of which is formed of a mix of stone walls and vegetation including trees. Views towards the Site are curtailed and restricted by intervening built form and vegetation, which translates into a Negligible Magnitude of Change and Negligible Effects for visitors to Southwell Minster at both Year 1 and 10.
- As illustrated by the recorded Viewpoints 1-18 which are taken from a range of locations from both inside the Site and from the surrounding landscape, views that contain the spire of Southwell Minster within the same angle of the view as the Proposed Development have not been recorded. From locations along bridleway 209/74/1 near Stubbins Farm there are opportunities to experience views of the spire and the Proposed Development, however, these two elements are not seen within the same angle of view. But instead are only seen when the receptor turns 180 degrees, looking northeast towards Southwell Minster and southwest towards the Site.