Technical Appendix 1: Landscape & Visual Assessment

Longhedge Solar Farm

30/11/2022

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1. EXECUTIVE SUMMARY

1.1. This technical report provides an assessment of the Landscape and Visual Impact Assessment effects resulting from the proposed solar farm with associated infrastructure at Longhedge, on land between Hawksworth and Thoroton, circa 15.5km east of Nottingham, Nottinghamshire.

1.2. The Proposed Development comprises the construction, operation, management and decommissioning of a grid connected solar farm and infrastructure including landscape and biodiversity enhancements designed to integrate the Proposed Development into its landscape context.

1.3. The Proposed Development locates solar arrays within the existing field structure of nine medium to large arable fields and away from existing hedgerows and Public Rights of Way (PRoW) maintaining buffers to allow vegetation to mature. The Proposed Development would introduce a new vertically low, medium-scale renewable energy feature into a rural landscape of medium to large gently undulating arable fields to the north of Thoroton and east of Hawksworth.

1.4. The overall design of the Proposed Development has considered landscape and visual effects within the confines of the nine arable fields to ensure that any potential effects upon the landscape and visual receptors are limited. To this end the Proposed Development has gone through an iterative design process and considered landscape and visual effects at each stage. This included exclusion of any development from more sensitive fields surrounding the Application Site, such as the nearest fields or sections of fields closest to settlement areas. This also included the fields to the south of Shelton Road and east of Longhedge Road, the field to the southeast corner closest to Thoroton. This would help to protect views from the edges of settlement and key views back to the setting of settlement areas.

1.5. The initial design input from a landscape and visual perspective also included advice on reductions in the Application Site extents to omit development from more sensitive field boundaries. This included provision for setbacks from several sections of the Application Site to allow for principal buffers, mitigation and new environmental enhancements including woodland, tree belts, wildflower meadow and new permissive bridleway access and connection to the PRoW network. Principal buffers include setbacks along the southern boundaries of field 1, the western and southern boundaries of field 8 and 9 and the more elevated northern half of field 5.

1.6. The proposed mitigation and enhancement landscape measures within these sections of the Application Site, combined with enhancement and management of other existing field boundaries, would reduce the duration of visual effects, whilst retaining and improving the field boundaries, in keeping with local policy and strategies.

1.7. Direct landscape effects include changing the prevailing arable land use to renewable energy generation. The solar PV panel layout has been designed to retain existing vegetation within

the Application Site as far as possible and no notable tree or hedgerow sections would be removed. The overall field scale that is characteristic of the Application Site and the surrounding landscape would remain and views to surrounding features would be retained from most locations or otherwise more local views would be improved with a range of new intervening mitigation features.

1.8. LVA effects are considered to be relatively localised to the Application Site and its immediate site boundaries and adjacent points with visibility reduced from most points beyond 280m from the Application Site.

1.9. Given the low height of the Proposed Development and the limited potential for views towards the Applications Site, all relevant direct and indirect effects would arise within a small section of the LCU*25: South Nottinghamshire Farmlands: Aslockton Village Farmland* and no adjacent Landscape Character Areas (LCA) and Landscape Character Types (LCT) would be affected to any notable extent. Furthermore, the key character of surrounding landscapes would remain intact and largely unaffected. This includes national or regional landscape designations or features of high landscape value.

1.10. The proposed landscape mitigation and enhancement measures would also aid in retaining and improving the existing field boundaries by gapping up and infilling. This would provide areas of enhanced landscape structure with woodland and wildflower meadow which would provide contributions to the landscape character patterns in the surrounding landscape. This would help to integrate the development into the wider landscape in line with local policy objectives.

1.11. At the end of the Proposed Development's lifespan, the solar PV panels would be removed and therefore the predicted effects are reversible. The Application Site would be returned to its former agricultural use, similar in form to its current state, but with added landscape fabric and character resulting from the new mitigation woodland and hedgerow features left in situ.

2. INTRODUCTION

Background

2.1. This Landscape and Visual Appraisal (LVA) has been prepared by Neo Environmental Limited, on behalf of Renewable Energy Systems (RES) Ltd ("the Applicant") in support of a planning application submitted to Rushcliffe Borough Council ("the Council") for a proposed 49.9 MW solar farm development (the "Proposed Development") on lands between Hawksworth and Thoroton, circa 15.5km east of Nottingham, Nottinghamshire.

2.2. The LVA has been undertaken by Andrew Jones, on behalf of Neo Environmental Ltd. Andrew is a Chartered Landscape Architect with over 25 years of consultancy experience and a Chartered Member of the Landscape Institute (CMLI).

2.3. The primary purpose of this LVA is to identify any likely adverse effects predicted during the construction, operational and decommissioning phase of the proposed development on the landscape and visual resources of the Application Site and surrounding landscape. Where any adverse effects are identified, appropriate mitigation measures have been proposed, and where practicable, embedded within the design of the proposed development.

Proposed Development

2.1. The Proposed Development will consist of the construction of a 49.9 MW solar farm. It will involve the construction of bi-facial ground mounted solar photovoltaic (PV) panels, new access tracks, underground cabling, perimeter fencing with CCTV cameras and access gates, 2x temporary construction compounds, substation and all ancillary grid infrastructure and associated works including environmental mitigation and enhancements. Refer to the Planning Statement (see Volume 1), for more details of the Proposed Development.

Overview of Approach

2.2. This LVA will provide an assessment of the potential effects of the Proposed Development on the existing landscape and visual amenity of the Application Site and surrounding area. The approach taken will follow the guidelines set out in the *Guidelines for Landscape and Visual Impact Assessment*[1] and other current best practice guidance where relevant. In accordance with GLVIA3 guidance, the level of appraisal is considered proportional to the development's scale, type, and likely effects.

2.3. While landscape and visual effects are closely related, they are separately assessed in this appraisal:

[1] Landscape Institute and the Institute of Environmental Management and Assessment (2013), *The Guidelines for Landscape and Visual Impact Assessment, version 3*.

- **Landscape effects** as a result of the Proposed Development may be defined as changes in the physical landscape which may give rise to changes in its character and quality, landscape patterns, designations, features and elements;
- **Visual effects** as a result of the Proposed Development comprise changes to the composition of existing views and visual amenity experienced by people, such as residents, recreational or vehicular users; and
- **Cumulative landscape and visual effects** with other similar existing solar farms that are consented not constructed or Developments (pending planning) in the surrounding area will also be considered where appropriate.

2.4. These effects may have a direct or indirect, adverse (negative), beneficial (positive) or neutral nature. They may vary in duration from short to long-term and have irreversible or reversible effects.

2.5. In this assessment, potential effects are considered at the following points, which allow an understanding of the changes which may occur in the landscape as a result of the Proposed Development over time, and judgements to be made about the duration and reversibility of effects:

- **During construction**: focussing on specific construction-related landscape and visual effects.
- **Year 1**: the effects when the construction phase is complete and the operational phase of the project starts.
- **Year 10:** when mitigation planting has fully matured.

Methodology and Assessment Criteria

2.6. The methodology and assessment criteria for the LVA is detailed within **Appendix 1B.** It aims to identify, predict and evaluate the key effects of the proposed development on the landscape and visual resources of the study area. In line with best practice, landscape and visual effects are considered separately throughout.

2.7. The asserted 'degrees of effect' grades used within in this LVA are classified by considering the relationship between the sensitivity of the receptor and the magnitude of change using a matrix as provided in **Table 1.1** below. These effects are graded on a 'sliding-scale' from **Major, to Negligible** and in some cases may use a combination of these categories to provide subtle differentiations in the degree of effect**.** Either direct or indirect effects and can be characterised as adverse or beneficial.

Table 1-1: Degrees of landscape and visual effects

Sensitivity (Susceptibility & Value)	Magnitude of Change				
	High	Medium	Low	Very Low	None
High	Major	Major to Moderate	Moderate	Moderate to Minor	No Change
Medium	Major to Moderate	Moderate	Moderate to Minor	Minor	No Change
Low	Moderate	Moderate to Minor	Minor	Minor to Negligible	No Change
Very Low	Moderate to Minor	Minor	Minor to Negligible	Negligible	No Change

2.8. GLVIA3 notes (Paragraph 6.42), that judgements relating to landscape and visual effects '*is not absolute and can only be defined in relation to each development and its specific location*'. As such, professional judgment plays an important role in determining the overall degree of effect

Study Area and Zone of Theoretical Visibility

2.9. An initial 5km study area was identified during the desk-based appraisal. During fieldwork, the Application Site was found to be largely contained by its generally low elevation, surrounding landform and established vegetation. Therefore, a more detailed 2km radius has been adopted for the consideration of potential landscape effects and visual effects. It is considered unlikely that adverse landscape and visual effects will be experienced beyond these distances. Both study areas are shown on **Figure 1.3 in Appendix 1A**.

2.10. A Zone of Theoretical Visibility (ZTV) map was produced indicating areas where the Proposed Development may be visible within the study area. The ZTV was based on bare earth topography and does not take account of potential screening by intervening vegetation and buildings, therefore representing a 'worst case scenario'. The ZTV is used as a tool for understanding where potential visual effects may occur. Receptors which are outside the ZTV will not be affected by the Proposed Development and are therefore not considered further in this appraisal. The ZTV and study area are shown on **Figure 1.3 Appendix 1A.**

Effects Assessed

2.11. The following effects have been assessed in accordance with the principles of GLVIA3:

- Effects on the physical landscape of the Application Site;

- Effects on visual receptors (people) at representative viewpoints;
- Effects on visual receptors at settlements and routes in the study area;
- Effects on designated landscapes within the study area; and
- Cumulative effects arising from the addition of the Proposed Development to the existing baseline of similar developments and those either under construction, consented or at application stage within the study area.

Effects Scoped Out

2.12. On the basis of the desk-based appraisal and fieldwork undertaken, the professional judgment of the LVA team, experience from other relevant projects and policy guidance or standards, the following topic areas have been scoped out of this appraisal:

- Effects on landscape and visual receptors beyond a 2km radius from the Proposed Development, where it is judged that potential adverse effects are unlikely to occur;
- Effects on landscape and visual receptors (people) that have minimal or no theoretical visibility as indicated by the ZTV and accounted for during fieldwork) and are therefore unlikely to experience adverse visual effects; and
- Cumulative interactions with similar proposed developments at screening and scoping given their uncertainty in the planning system.

Consultation

2.13. The scope and extent of work for the LVA, including the study area radius, methodology and the proposed number and location of representative VPs was consulted and agreed upon with Rushcliffe Borough Council via emails with Tom Pettit (Design and Landscape Officer) between 04-07/02/2022. The scope of work is considered to be appropriate to cover all potentially material landscape and visual impacts. The extent of the study area is shown on **Figures 1.1-1.3** in **Appendix 1A.**

Assumptions / Constraints

2.14. It is necessary to select a range of representative viewpoints across the study area as the scope of the appraisal does not allow for all potential visual receptors to be assessed individually. Many receptors are located within private lands, e.g. residences, and cannot be accessed, therefore, where required, a nearby representative point was chosen on the public road. Variations in the weather can bring about differences in the degree of visibility experienced within the Application Site or from a viewpoint on the day of the field work, and any other given day. Fieldwork, including baseline photography was carried out in February 2022 during leaf fall under sunny and overcast conditions.

2.15. This appraisal only considers the Proposed Development as per the site layout in **Figures 4 and 5 of Volume 2: Planning Application Drawings.**

2.16. Although the effect of mitigation planting is considered at year 1 and 10, it should be recognised that after approximately year 5 (short term duration), the growth of hedgerow and woodland planting should be sufficient to provide effective screening for most parts of any nearby infrastructure and consequently, most of the significant effects predicted during year 1, are likely to become not significant at around this time.

Supporting Information

2.17. As referenced throughout, the following illustrative figures support this LVA:

Appendix 1A:

- Figure 1.1: Landscape Character Areas;
- Figure 1.2: Landscape Designations;
- Figure 1.3: Viewpoint Locations with ZTV;
- Figure 1.4: Viewpoints 1 & 2;
- Figure 1.5: Viewpoints 3 & 4;
- Figure 1.6: Viewpoints 5 & 6;
- Figure 1.7: Viewpoints 7 & 8;
- Figure 1.8: Viewpoint 1 - year 1 & year 10;
- Figure 1.9: Viewpoint 4 - year 1 & year 10;
- Figure 1.10: Viewpoint 5 - year 1 & year 10;
- Figure 1.11: Viewpoint 6 - year 1 & year 10; and
- Figure 1.12: Landscape and Ecology Management Plan (LEMP).

Appendix 1B: Methodology

Appendix 1C: Published Landscape Character Extracts

Appendix 1D: Illustrative Viewpoints A -B photo panoramas

3. LANDSDCAPE POLICY CONTEXT

3.1. For details of the National Planning Policy Framework and how it relates to landscape and visual matters, refer to the Planning Statement (see Volume 1).

3.2. As detailed in the Planning Statement (see Volume 1), the development plan relevant to this application consists of the *Rushcliffe Local Plan* (Parts 1 and 2, Adopted 2014 and 2019). The Planning Policies that are relevant to the landscape and visual considerations of this application, are summarised as follows.

Rushcliffe Local Plan, 2014 (Part 1, Core Strategy)

Policy 11 Historic Environment

3.3. Policy 11 notes that [inter alia] that:

> *"Proposals and initiatives will be supported where the historic environment and heritage assets and their settings are conserved and/or enhanced in line with their interest and significance. Planning decisions will have regard to the contribution heritage assets can make to the delivery of wider social, cultural, economic and environmental objectives."*

POLICY 16: Green Infrastructure, Landscape, Parks and Open Spaces

3.4. The policy states [inter alia] that:

> *"A strategic approach to the delivery, protection and enhancement of Green Infrastructure will be taken, through the establishment of a network of primary Green Infrastructure corridors and assets (as shown on the Key Diagram), together with corridors and assets of a more local level which will be defined through Local Development Documents.*
>
> *"The approach will require that: …. e) Landscape Character is protected, conserved or enhanced where appropriate in line with the recommendations of the Greater Nottingham Landscape Character Assessment. Criteria for the assessment of proposals and any areas of locally valued landscape requiring additional protection will be included the Local Plan Part 2 (Land and Planning Policies)."*

Rushcliffe Local Plan, 2019 (Part 2 Land and Planning Policies)

Policy 1: Development Requirements

3.5. For all proposed development, Policy 1 states [inter alia] that:

"Planning permission for new development will….. be granted provided that the following (landscape-related) criteria are met:

1. there is no significant adverse effect upon the amenity, particularly residential amenity of adjoining properties or the surrounding area, by reason of the type and levels of activity on the site, or traffic generated;….

3. sufficient space is provided within the site to accommodate the proposal together with ancillary amenity and circulation space;….

7. there is no significant adverse effects on landscape character; and

9. there is no significant adverse effect on any historic sites and their settings including listed buildings, buildings of local interest, conservation areas, scheduled ancient monuments, and historic parks and gardens…."

Policy 16: Renewable Energy

3.6. In relation to landscape, Policy 16 states [inter alia] that :

"Proposals for renewable energy schemes will be granted planning permission where they are acceptable in terms of:

b) landscape and visual effects;

e) the historic environment;

f) open space and other recreational uses;

g) amenity of nearby properties;

i) form and siting;

j) mitigation; and

l) cumulative impact with existing and proposed development."

Policy 22 Development within the Countryside

3.7. Policy 22 states [inter alia] that;

"Land beyond the Green Belt and the physical edge of settlements is identified as countryside and will be conserved and enhanced for the sake of its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, the wealth of its natural resources, and to ensure it may be enjoyed by all

Within the countryside development for the following uses will be permitted subject to the requirements set out in (3) below: and i) renewable energy in accordance with Policy 16.

3. Developments in accordance with (2) above will be permitted where:

a) the appearance and character of the landscape, including its historic character and features such as habitats, views, settlement pattern, rivers, watercourses, field patterns, industrial heritage and local distinctiveness is conserved and enhanced;"

Policy 28: Conserving and Enhancing Heritage Assets

3.8. Although an assessment upon specific heritage assets is beyond the scope this LVA, the effect on their landscape settings are considered, with the following policy notes therefore partially relevant:

"Proposals that affect heritage assets will be required to demonstrate an understanding of the significance of the assets and their settings, identify the impact of the development upon them and provide a clear justification for the development in order that a decision can be made as to whether the merits of the proposals for the site bring public benefits which decisively outweigh any harm arising from the proposals."

Policy 34 Green Infrastructure and Open Space Assets

3.9. Policy 34 states [inter alia] that;

"The following Green Infrastructure assets will be protected from development which adversely affects their green infrastructure function (or their contribution to a wider network) unless the need for the asset is proven to no longer exist and the benefits of development, in that location, outweigh the adverse effects on the asset:

- *….Amenity Space and Semi-Natural Green Space;*
- *….Rights of Way; and*
- *….Woodlands and Traditional Orchards.*

Development that protects, enhances, or widens their Green Infrastructure importance will be supported, provided it does not adversely affect their primary functions.

Where a proposal would result in the loss of Green Infrastructure which is needed or will be needed in the future, this loss should be replaced by equivalent or better provision in terms of its usefulness, attractiveness, quantity and quality in a suitable location. Replacement Green Infrastructure should, where possible, improve the performance of the network and widen its function.

Planning permission will not be granted for development which would adversely affect access to open spaces and opportunities should be sought to protect or enhance the rights of way network and, where applicable, its open environment."

Policy 37 Trees and Woodlands

3.10. Policy 37 states [inter alia] that;

"1. Adverse impacts on mature tree(s) must be avoided, mitigated or, if removal of the tree(s) is justified, it should be replaced. Any replacement must follow the principle of the 'right tree in the right place'.

2. Planning permission will not be granted for development which would adversely affect an area of ancient, semi-natural woodland or an ancient or veteran tree, unless the need for, and public benefits of, the development in that location clearly outweigh the loss.

3. Wherever tree planting would provide the most appropriate net-gains in biodiversity, the planting of additional locally native trees should be included in new developments. To ensure tree planting is resilient to climate change and diseases a wide range of species should be included on each site."

Policy Aims

3.11. A key objective of the *Rushcliffe Local Plan* is to conserve and enhance Rushcliffe's unique landscape character and local distinctiveness. In doing so, the landscape-related policy framework sets out a clear suite of criteria in which to assess the landscape and visual effects of the Proposed Development, in the context of wider social and economic material considerations. In summary therefore, the Proposed Development should:

- be sensitively sited with a design and layout that positively integrates with its local context;
- conserve and enhance landscape character;
- protect and enhance Green Infrastructure;
- protect the landscape setting of listed cultural features (e.g. Listed Buildings, Historic Parks & Gardens);
- protect the openness and characteristics of the Green Belt; and
- not be visually intrusive, whilst protecting the visual amenity of any residents and users of public rights of way.

4. BASELINE ASSESSMENT

4.1. The baseline assessment establishes the existing landscape and visual resources against which the effects of the Proposed Development are predicted. It describes the site and its setting, including landscape character and any designated landscapes in the wider landscape, along with an assessment of sensitivity to change. Visual receptors such as residents, road users and those undertaking recreational activity, are also assessed. Following on from this, a selection of viewpoints is identified to help inform the subsequent assessment of visual effects.

The Site Description

4.1. The Application Site is located in a semi-rural setting on lands between the settlements of Hawksworth (0.1km west) and Thoroton (0.2km southeast), circa 15.5km east of Nottingham, Nottinghamshire. (See **Figure 1** of **Volume 2: Planning Application Drawings** for further detail).

4.2. Centred at approximate Grid Reference E476129, N343467, the Proposed Development Site comprises nine fields covering a total area of c. 94.24hectares (ha), although only 37.7ha of this area is required to accommodate the solar arrays themselves, with the remaining area being used for ancillary infrastructure and mitigation and enhancement measures. The Proposed Development Site covers low lying lightly undulating agricultural land with an elevation range of c. 20m to 25m AOD. Internal field boundaries comprise, hedgerows, tree lines and several linear strips of woodland shelter belt. External boundaries largely consist of mature to lower hedgerows with individual trees and some evident gaps. In terms of existing infrastructure; electricity pylons extend north-south through fields 5, 6 & 8, whilst electricity lines pass northwest to southwest through fields 4, 5, 6 & 9.

4.3. The Application Site will be accessed via the creation of a new entrance off the linear public highway Thoroton Road. The vegetation is set back from the road verge by a few metres and therefore visibility will not be an issue. Appropriate visibility splays are included within the CTMP.

4.4. The haul route will be from the A46 to the southwest of the Application Site. The vehicles will exit the A46, signposted A6097 (Mansfield), take the 4th exit at the roundabout onto Bridgford Street followed by the 1st exit at the next roundabout onto Fosse Way. Vehicles will travel along this road for approximately 1.5km to the next roundabout, where they will take the 2nd exit onto Tenman Lane. This road will be travelled on in an eastern direction for approximately 3.2km before taking a left hand turn onto Hawksworth Road and vehicles will travel along here for approximately 2km before taking a right hand turn onto Thoroton Road. Vehicles will travel in a southeast direction for approximately 0.9km before turning left into the Application Site.

4.5. There is one recreational route located within the Proposed Development Site (Bridleway 1 & 6 that pass through the northern fields), and several located close by (**See Figure 3 of Vol 2: Planning Drawings**). National Cycle Network (NCN) route 64 shares the minor road on the east side of the Proposed Development Site.

4.6. The Proposed Development Site is mostly contained within Flood Zone 1 (at little or no risk of fluvial or tidal / coastal flooding), however there are some areas of Flood Zone 2 and 3a which follow the watercourse/drains within the site and have been carefully considered during the design phase.

Landscape Character Baseline

4.7. The following section provides a summary of the Landscape Character Areas (LCA) and Landscape Character Types (LCT) identified in published landscape character assessments, which may be affected by the Proposed Scheme. They include published assessments, undertaken by various organisations at national, county and district scales.

National Character Areas

4.8. The Proposed Development lies within **NCA Profile:** 48: Trent and Belvoir Vales. This NCA 48 covers the immediate setting of the Proposed Development and whole of the initial study area within 4-5km. The NCA Profile for 48, summarises the wider area of the NCA as:

"…characterised by undulating, strongly rural and predominantly arable farmland, centred on the River Trent. A low-lying rural landscape with relatively little woodland cover, the NCA offers long, open views"

4.9. Statements of Environmental Opportunity (SEO) are included within the NCA48 profile. For this LVA they include;

- *"SEO 2: Enhance the woodland and hedgerow network through the planting of small woodlands, tree belts, hedgerow trees and new hedgerows to benefit landscape character, habitat connectivity and a range of ecosystem services, including the regulation of soil erosion, water quality and flow"*
- *"SEO 4: Maintain and enhance the character of this gently undulating, rural landscape. Promote and carefully manage the many distinctive elements that contribute to the overarching sense of place and history of the Trent and Belvoir Vales"*

County and District landscape character

4.10. At the county level, the landscape character of the site and surrounding landscape is covered by the *Nottinghamshire Landscape Character Assessment*, (2009), which defines the area around the Proposed Development and within the study area as "The South Nottinghamshire Farmlands" Regional Character Area (RCA). This study notes the area around the Proposed Development has "*A prosperous lowland agricultural region with a simple rural character of large arable fields, village settlements and broad alluvial levels"*

4.11. These RCA's, have been detailed further, mapped and described in the *Melton and Rushcliffe Landscape Sensitivity Study: Wind Energy Development,* (2014) (MRLSS), as shown in **Appendix 1C.**

4.12. As illustrated in **Figure 1.1: Appendix A**, the Proposed Development lies within the district level Landscape Character Assessment Unit (LCU) *25: South Nottinghamshire Farmlands: Aslockton Village Farmland. T*he host character type stretches from the Application Site and covers the detailed study area within 2km to the east and north, extending up to and beyond 3km to the west and 10km to the south. It therefore provides the key focus of landscape character across the Application Site and covers all key principal zones of visibility from key points (**Figure 1.3**).

4.13. The key landscape characteristics of the LCU 25 relevant to the Application Site [inter alia] are as follows:

- *Series of Mercia Mudstone outcrops and thin bands of lower-lying alluvial levels which vary between 5 and 10m.*
- *Watercourses are lower than surrounding ground with arable fields extending to their banks and little riparian vegetation.*
- *Rural remote and tranquil character comprising arable farmlands and a regular dispersal of small rural settlements.*
- *Land use is mostly arable although pasture is common around village fringes.*
- *Field pattern ranges from small-scale fields around village fringes to expansive large scale fields in open countryside.*
- *Field boundaries are almost all hedgerows which are of variable condition; they tend to be more intact around pasture fields where left to grow taller whereas in adjacent arable fields are often low and in places quite fragmented.*
- *There is a relatively low level of woodland cover with a regular pattern of small geometric and irregular shaped woodlands throughout; other woodland is often linear in character following the line of a former railway, around village fringes and where individual hedgerows are left to mature.*
- *Hedgerow trees are infrequent although clustered around pasture fields on village margins and within villages. Where hedgerows are often taller around arable fields trees tend to be less frequent.*
- *The combination of taller hedgerows, hedgerow trees and scattered woodlands creates a dispersed wooded character which is key component within skyline views.*
- *Dispersed small rural settlements include both linear and nucleated patterns; they are often situated on the slightly higher Mercia Mudstone outcrops. Bingham is the only large commuter settlement*.
- *Villages of Elton on the Hill, Granby, Sutton and Barnstone are prominent on higher ground; they are seen mostly as a single line of dispersed housing set within trees.*
- *Rooflines of villages are generally obscured by mature trees; where visible they appear dispersed and as individual or small groups of properties. Church towers and spires are prominent above the villages and are distinctive features within the landscape.*

- *Villages are particularly distinctive often containing very little modern development; they are along narrow roads often bordered by red brick walls. All villages are well wooded with many mature trees along roads within small fields and open spaces within the villages and around their fringes.*
- *Buildings within villages include small cottages and terraces and larger individual properties both set behind small and larger front gardens.*
- *Churches within villages are almost all constructed from local stone and are either towers or spires and always set within mature grounds.*
- *Narrow winding lanes are common throughout the landscape although a few straighter roads across lower lying land are present around Orston. Roads are characterised by often large verges or pockets of grassland.*
- *Scattered farmsteads, often constructed of red brick with small out buildings and barns are throughout the LCU although not present on the lowest lying ground.*
- *Many prominent overhead line routes are present within the landscape and are always visible on the skyline.*
- *Expansive long distance views across the landscape to the Belvoir Ridge to the south in Leicestershire*.

4.14. The study also notes important landmarks and views and notes for this LCU that "Church spires form local landmarks throughout the LCU".

Landscape Value

4.15. The setting of the Proposed Development in this LCU is fairly representative of the defined characteristics noted in the MRLSS, noting particularly around the Site the field pattern which comprises undulating farmland of large arable fields interspersed with some hedgerows, tree belts and woodland and hedge lined rural lanes.

4.16. In the surrounding context there are some smaller villages with some cultural attributes with Church spires and status as conservation area but these are located at slightly lower lying points and surrounded by smaller fields and a stronger combination of field enclosures, with trees

4.17. There are some isolated views across the character areas from slightly higher ground within the Application Site, although the combination of undulating topography and landcover mostly obscures clear views from other surrounding points.

4.18. The Application Site would lie within the undulating farmland surrounded by hedgerows and occasional tree belts and woodland, which provide varying levels of containment and screening in the surrounding landscape. There are some recreational opportunities in the form of PRoWs which contribute to landscape value at a community level.

4.19. The Site context includes a larger simple scale with field boundaries in variable condition. There are no landscape designations within the detailed study area. There is also a prominent series of steel lattice pylons supporting overhead power lines traversing the site from north to south

through fields 5, 6 and 8 which add linear infrastructural elements in the landscape and interrupt its unity. As such the landscape value is assessed as **Medium** in line with Table 1.1 and 1.2 of the Methodology in **Appendix 1B.**

Landscape Susceptibility

4.20. The LCU across the Application Site comprises medium to large scale agriculture which is interspersed with intermittent vegetated enclosures. The existing character across and surrounding the Application Site is considered to be of **Medium susceptibility** with moderate potential to accommodate the specific Proposed Development.

Landscape Sensitivity

4.21. The combination of the medium value and medium susceptibility results in a **Medium sensitivity** to the Proposed Development.

Surrounding LCUs

4.22. Given the extent of the host LCU covering all of the detailed study area and principal areas of visibility, the potential for views and effects on character or the setting of other surrounding LCUs is considered to be very limited and as such they are not considered further within this assessment.

Landscape Designations

4.23. Landscape designations are landscapes which are attributed special protection at national (legislative) to local (Local Development Plan) level, to protect against inappropriate development. Historic and ecological designations also contribute to the overall landscape character and quality. These are briefly outlined below and considered in detail within the respective Technical Reports. The designations are indicated on **Figure 1.2: Appendix 1A.**

4.24. There are no statutory landscape designations covering the site or its immediate surroundings within the detailed study area as illustrated in **Figure 1.2: Appendix A**. There are no Registered Parks and Gardens (RPGs) within 2km with the nearest at Flintham Hall at 2.2km to the northwest and beyond the principal zones of visibility. See below for a summary of other features of value and other relevant designations including cultural heritage designations.

Other features of Landscape Value

4.25. Within the 2km study area and ZTV there are a range of features that contribute to the value of the local landscape. These features include:

- Public Rights of Way network including a National Cycleway Network route 64;
- A distribution of woodlands and network of field boundaries; and
- Secondary Landmarks of Borough-wide importance (noted in the MRLSS);

4.26. As noted within the MRLSS there are Secondary Landmarks of Borough-wide importance in the study area. These include Church spires and towers at Thoroton and Hawksworth and at other surrounding points. The MRLSS notes that these *"form local skyline landmarks across much of the study area, in fact they are a particularly distinctive feature of the landscape. These churches contribute to the historic character and scenic quality of the Boroughs and it is desirable to conserve them as landmark features"*. These have been assessed within the representative viewpoint assessment where views are likely.

Other Relevant Designations

4.27. A number of historic landscape features also exist within the study areas. Whilst these areas are considered within the Cultural Heritage Impact Assessment (**Technical Appendix 3**), they are also identified as part of the landscape chapter, as they have a wider setting in the landscape and can be important elements in determining the baseline landscape character of a site.

4.28. In terms of the landscape setting of these historic landscape features (their visual and contextual relationship with their surroundings) there are two Conservation Areas (CAs) at Thoroton (165m south) and Hawksworth (10m, south) which lie close to the Application Site boundary. While there would be some potential for visibility from the farmland areas between the Application Site and the CA's, as noted on the ZTV, views from the CA's would be more restricted due to localised variations and landform and landcover patterns, as evidenced on fieldwork and shown on the photopanels in Figures **Figure 1.4-7: Appendix 1A** and evidenced further by the **Illustrative Viewpoint A** in **Appendix 1D.**

VISUAL BASELINE

4.29. The purpose of the visual assessment as defined in GLVIA3 (Paragraph 3.15):

"to establish the area in which the development may be visible, the different groups of people who may experience views of the development, the places where they will be affected and the nature of the views and visual amenity at those points"

4.30. The extent of visibility is firstly considered within the ZTV and subsequently from a number of agreed representative viewpoints that cover a broad range of sensitive receptors to represent different types of view and different types of viewer (i.e. visual receptors). Integral to this process is the need to define the visual value and susceptibility to change, against which the assessment of effects can be made.

4.31. The ZTV (**Figure 1.3: Appendix 1A**) and fieldwork confirmed the following principal patterns of visibility:

- The Application Site is visible from adjacent areas of open farmland and primarily within 2km, which includes the area between and the fringes of the two settlements at Thoroton and Hawksworth. After this point, visibility would be more restricted beyond 2km.
- Gently undulating topographical changes associated with the landscape around the site, would limit clear visibility to the majority of the Application Site from most surrounding points and from the settled edges of the two settlements at Thoroton and Hawksworth to the south and west.
- With intervening surface features such as vegetation and buildings, clear views are typically limited from most low lying points beyond the Application site boundaries beyond 250m-280m.
- The set back of PV panels from the southeastern and western boundaries and higher ground to the northeast, and the inclusion of environmental mitigation would help to screen and filter any potential clear views of the panels from the fringes of the two settlements and help to integrate the Proposed Development into its setting.

Key Visual Receptor Groups

4.32. A range of visual receptors and receptor groups can be expected to be affected by the development from both static and sequential points.

4.33. The extent of the effect upon certain groups will vary according to their level of sensitivity to the nature of development. For the purpose of this assessment three key groups are identified: (1) local residents of nearby settlements; (2) the travelling public/road users; and (3) recreational visitors / tourists to the area. The baseline sensitivity and susceptibility of these groups is summarised in the methodology in **Appendix 1B**.

Representative Viewpoint Appraisal

4.34. The representative viewpoint ("VP") appraisal has been undertaken from 8 viewpoints supported by 2 illustrative viewpoints. These VPs include those agreed with the landscape officer at Rushcliffe borough Council in February 2022. The viewpoints represent a range of visual receptors and view types and were selected following the GLVIA 3 guidance and further Landscape Institute guidance for the Visual Representation of Development Proposals[i]. They are used as 'samples' on which to base judgements and will help establish how visible the Proposed Development will be from specific locations and help to gauge the anticipated effects upon visual amenity

4.35. The photographs for the visualisations have also been taken from a range of 'publicly accessible' points, to cover a representative range of viewing distances, elevations and orientations, with different viewing experiences, in line with GLVIA 3. The Viewpoints are defined in **Table 1.2** below and the Viewpoint Panoramas are shown in **Figures 1.4 – 1.7 in Appendix 1A**.

Table 1.2: Representative Viewpoint Baseline

VP	Location	Distance	Key Receptor Grps	Sensitivity
1	Minor Road, Thoroton	0.16km	Residents and Road Users to the southeast	High-Medium
2	PRoW to Thoroton from minor road (Thoroton FP2)	0.01km	PROW to the west side of the site	High-Medium
3	PRoW Hawksworth, south of Manor Farm	0.41km	PRoW Users, residents and Conservation Area to the west	High-Medium
4	Main Road, north side of Hawksworth	0.02km	Residents, road users to the west	High-Medium
5	PRoW, east side of Main Road (Hawksworth BW1)	0.0km	PRoW Users within the site to the northwest x2 sequential views	High-Medium
6	PRoW, northeast site boundary	0.0km	PRoW and road users to the northeast	High-Medium
7	PRoW, site boundary	0.01km	PRoW and road users to the east	High-Medium
8	Longhedge Lane, at Portland Fishing Lakes	0.28km	Road Users and Recreation Users to the north	Medium - Low
Illustrative Views VPA and VPB – refer to Appendix 1D				

5. POTENTIAL IMPACTS AND MITIGATION

5.1. The main features of the solar array proposal which could potentially result in landscape and visual impacts are:

- Changes to land use and pattern;
- New elements such as solar PV panels, transformers, inverters, substation, fencing and CCTV cameras;
- Access arrangements;
- Hard surface areas;
- Loss of existing vegetation; and
- New planting areas.

5.2. It is noted that the Proposed Development would install Solar PV panels at a maximum height of 2.8m. As such it is relatively low in height and there is potential for management of existing boundaries and mitigation measures to help screen and filter views by a combination of woodland, scrub and/or hedgerows from most near and middle-distance views where views and the Application Site context are at similar elevations. The principal mitigation measures are outlined below.

Landscape Mitigation Measures

5.3. Landscape mitigation proposals are incorporated into the scheme design and are illustrated on the Landscape and Ecological Management Plan (LEMP) (**Figure 1.12: Appendix 1A**). The landscape mitigation proposals include measures that aim to avoid, reduce, or remedy adverse any potential impacts on the landscape by ensuring that the scheme has a good fit within the landscape setting. It also includes measures that would reduce the visual prominence of the solar arrays in local views by enhancing the condition of key field boundaries on the perimeter of the Application Site or more exposed sections of the Application Site.

5.4. Measures have been incorporated into the siting and design of the Application Site to reduce potential impacts and improve the layout of the Proposal, including:

- Maximum height of the modules has been reduced from 3.5m to 2.8m.
- The Application Site was selected initially because of the large, simple scale of fields, its location away from more sensitive valued landscapes and its location close to the required grid connection point.
- The initial Application Site extents was refined through an iterative design process, taking on board landscape and visual constraints at each stage. This included exclusion of any development from more sensitive fields surrounding the site, such as the nearest fields or sections of fields closest to settlement areas. This also included the fields to

the south of Shelton Road and east of Longhedge Road, the field to the southeast corner closest to Thoroton and fields to the east of Hawksworth. The closest field to Hawksworth Manor was removed from the design of the development to mitigate possible views within the village. Set back of panels and new boundary planting along the southern boundary of field 3 has also been included to screen views from the gardens of Hawksworth Manor.

- This would help to protect views from the edges of settlement and key views back to the setting of settlement areas.
- Exclusion of solar PV panels from higher ground to the northeast within field 5 which would have been more visible from the surrounding landscape and to reduce the potential for views towards the Site, as well as reduce the effects on the PRoW as it crosses higher ground and where more panoramic views are available.
- Setting back of panels from the south sides of field 1 and retaining and enhancing the amenity of adjacent residential properties with new mitigation planting and hedgerow gapping up and management.
- Setting back of panels from the western and southern boundaries of field 8 and 9 and retaining and enhancing the field boundaries by gapping up and supplementing with new mitigation planting and management to fully screen the Proposed Development from the edges of Hawksworth and Thoroton to the south.
- Setting back the solar panels and development edges from other boundary points where new permissive footpaths are proposed, such as the east side of fields 5, 7 and 9, south of field 8 and the west side of fields 1 and 2
- Setting back the substation area within a lower lying central section of the site so that it is less visible from the surrounding area. Although the telecommunications mast would be more visible it would sit in the same context as other tall structures such as the steel lattice pylons that sit in the middle of the Site;
- Screening elements of the Proposed Development from key receptor locations, e.g., users of the PRoW and residential properties adjacent to the Site boundaries using a mix of characteristic hedgerows and woodland planting; and
- Reflecting existing landscape elements and character in new mitigation planting.

5.5. The key landscape and mitigation measures are shown on the LEMP (Figure 12) and include:

- New woodland edge along the southern side of field 8 and field 9 and the, northern boundary of field 5, using native species of local provenance to screen views from residential properties to the west and south and PRoW users to the north.
- New hedgerow planting with hedgerow trees along the north and south sides of field 1, southside of field 2, through field 4 and on the northern, eastern and southern edges of the development in field 5, using native species of local provenance to screen views from the PRoW users and users of the proposed permissive bridleways.

- Gap up existing field boundaries around the perimeter of the Proposed Development and additional enhancement measures (comprising native species of local provenance) and management and maintenance of these features up to 5-6m to reinforce the structure and resilience of the landscape fabric.
- The proposed landscape management would produce landscape features of varied heights to provide effective screening towards the Proposed Development within 5 - 10 years (short to medium term). The proposed elements would also enhance the local landscape character and provide additional screening towards the Proposed Development, helping it to integrate with the surrounding wooded farmland landscape.

6. ASSESSMENT OF EFFECTS

Landscape Effects

6.1. The following section assesses the magnitude of effects that the Proposed Development would have on the landscape character and the physical features of the baseline landscape. These effects would be combined with the value attached to the landscape and the landscape's susceptibility and sensitivity to the Proposed Development, as mentioned in the baseline section above, to determine the extent of effects.

6.2. The assessment will firstly consider the effects of construction on the Application Site and then assess the operational effects at Years 1 and 10 as well as at the decommissioning phase. Further details can be found in the Methodology section within Appendix 1B.

Construction Effects

6.3. The construction works would require a temporary disturbance to the Site's arable fields to install the solar farm and its associated infrastructure. This would also include two short sections of hedgerow to facilitate access but these will not include any sections with mature trees. The construction work would be phased and would last approximately 6 months.

6.4. Any disturbed ground resulting from the movement of machinery and installation of the various structures and underground cabling trenches would be gently graded back and reseeded with grass upon completion. No notable tree or hedgerow removal is anticipated to construct these elements of the Proposed Development.

6.5. The design of the Proposed Development and its structures would be offset by 5m from the nearest existing and proposed hedgerows, woodland, drainage ditches and surface water.

6.6. The retained field boundary hedgerows and tree belts within the Application Site extents would be gapped up and enhanced to provide mature field boundaries that link with the pattern and character of other field boundaries and tree belts in the wider setting. In addition, approximately 2.5km of new hedgerows and tree belts would be planted along intermittent sections of the Application Site on its boundaries. As a further measure, wildflower meadows and further tree and woodland planting would be planted within the offsets areas within the fields (refer to the LEMP, in Figure 1.12, Appendix 1A for Details) .

6.7. During the temporary construction phase, there would be a notable increase of activity within the limits of the Application Site. This would include construction traffic and construction activity. The construction works would have a localised temporary disturbance to a small portion of the landscape within the undulating farmland or larger arable fields interspersed with some hedgerows, tree belts and woodland and relatively small section of the LCU *25: South Nottinghamshire Farmlands: Aslockton Village Farmland*. This would relate to the arable

farmland rather than the higher valued features such as the boundary vegetation, hedgerows, trees and woodland.

6.8. Movement of construction traffic to and from the Site would result in some minor disturbance along local minor roads before dissipating. Traffic would be quickly absorbed across the wider road network. For more information on traffic please refer to the CTMP (**Technical Appendix 5** within **Volume 3**).

6.9. The direct effects upon the Site during the construction phase would be temporary and short-term, lasting only for the construction period. They would have a Medium magnitude of change which together with the Site's Medium sensitivity, would result in a **Moderate adverse** effect during construction.

Operational Effects

Landscape Character

6.10. During operation, direct landscape effects would include replacing the prevailing improved grassland land use within the Application Site with energy infrastructure elements which principally contain solar PV panels.

6.11. The solar PV panel layout has been designed to sit within a series of undulating fields and are set back from more sensitive sections of the surrounding landscape around the nearest villages. The layout has also been offset from field boundaries to retain existing vegetation within and around the outer edges of the Application Site as far as possible. As such, no notable trees or tree belts would be removed. A pedestrian access on the Main Road will enable users to access the new permissive bridleway in field 1 and vehicular access off Thoroton Road into Field 8 (refer to the LEMP, **Figure 12: Appendix A**). As such the overall field scale that is characteristic of the Application Site would remain.

6.12. As noted above, the design evolution has removed solar PV panels from more visible fields on the outskirts of the villages in order to reduce any potential visual impact and retain the rural setting. For example, the southern sections of field 1, the western boundaries of field 8 and north-eastern sections of Field 5 do not contain solar PV panels which avoids potential effects on the immediate site setting and the nearest residential properties on edges of settlement and also from more elevated sections of the PRoW to the north.

6.13. The design of the proposed development has also been pulled back from Application Site boundaries at field 1, 2, 5, 7, 8 and 9 to allow for suitable offsets from new proposed permissive bridleways and allow for good field boundary margins. In addition the substation area has been located within a central low lying part of the site which has good screening from surrounding vegetation patterns which would help to reduce visibility and effects on character. While the telecommunications mast within the substation area would be more visible it would sit in the same context as other tall structures such as the steel lattice pylons that sit in the middle of the Site.

6.14. In addition, new mitigation planting in the form of approximately 1.08 ha new woodland block planting and approximately 2.5km hedgerows would be planted at key locations to protect views from settlement and PRoW whilst the other field boundaries around the perimeter of the Application Site would be managed and enhanced and provide a more dense screen to enhance the vegetated character of the farmland and improve the field boundaries which are noted as being of variable condition in this landscape. This is intended to screen views of the panels from the nearest locations to the south and west and PRoW to the north whilst preserving the character of views across the undulating farmland.

6.15. The proposed landscape mitigation and enhancement planting would help to filter and screen the Proposed Development from near and middle-distance views, as well as integrating the development into the surrounding landscape setting in the longer term.

6.16. The Proposed Development, therefore, primarily involves the addition of elements rather than removal of notable existing features. The solar farm would create a temporary new land use alongside the agricultural land uses and within the existing framework of fields and field boundary vegetation. The elements of the development would be in keeping with the vertical scale of existing features in and around the Application Site (such as hedgerows and trees) and lower in height than many features such as trees and power lines in the surrounding context.

6.17. Other effects would be effects on wider character patterns from areas of landscape outside the Application Site. From close distances beyond the site boundaries the potential for views from within the host LCU are restricted to close range points where views are somewhat restricted to just peripheral edges of the Application Site and filtered by characteristic landform variations and intervening landcover patterns. As a result, the extent of visibility would extend across a small proportion of the LCU and the large majority of the LCU lies beyond this area, allowing for the retention of key characteristics within LCU to remain largely intact. The Proposed Development would not, therefore, fundamentally change the wider character of the LCU.

6.18. The magnitude effect on the landscape character the LCU *25: South Nottinghamshire Farmlands: Aslockton Village Farmland* context, would be Medium on completion (Year1) and in the short term (up to approximately 5 years), reducing to Low in the medium to long-term as the pattern of characteristic mitigation planting matures around the Application Site boundaries and the site is more heavily screened from the surrounding landscape. As the sensitivity of the Site is judged to be medium, the extent of effect would be Moderate Adverse (Operational Year 1), but reduces Moderate to Minor in the medium to long term (, up to Year 10).Refer to Appendix 1 A for details of duration.

Surrounding LCT's

6.19. As noted in the baseline, given the extent of the principal areas of visibility arising from the Proposed Development being restricted to the host LCU the potential for effects on surrounding landscape character areas and types is considered to be limited with the key character across the large majority of the LCUs remaining intact and unaffected. This is evidenced by the visual assessment in the following section.

Decommissioning effects

6.20. At the decommissioning phase, there would be some localised disturbance to the rural landscape while structures are dismantled and removed from the Application Site. However, at the end of decommissioning, the land would be reinstated to its former full agricultural use, aiding the reversal of any effects on the landscape character. By this stage, the retained field hedgerows and new mitigation woodland areas would have filled out and have an improved condition.

6.21. The direct effects upon the Application Site during Decommissioning would be temporary and short-term lasting for the decommissioning period. They would have a **Low magnitude** of change which together with the Application Site's sensitivity, would result in no more than a **Moderate to Minor adverse** effect during decommissioning.

Designations

6.22. No national or regional landscape designations or features of high landscape value have been identified that require detailed landscape assessment.

Other features of Landscape Value

6.23. The proposed scheme design iteration has considered the protection of views to church spires as Secondary Landmarks of Borough-wide importance on the skyline in the various iterations of the Site design. In doing so, solar PV panels have been omitted from a number of areas..

6.24. Within the Application Site, the scheme has been set back from key points of elevation with public access, within field 5 where there are views back towards the church spire at Thornton and the intervening view has been planted to protect these views (see viewpoint 6). While there would still be some potential for some effects on views to the landmark at Thoroton and also the landmark at Hawskworth these would be from less advantageous points in the surrounding area.

Landscape Effects Summary

6.25. The Proposed Development has been designed to fit within the confines of the nine fields of farmland, minimising any disturbance to notable existing mature landscape elements and features across the Application Site. The land use and landcover would change from arable farmland to one involving the opportunity for diversification in the form of dual use: renewable energy generation and sheep farming (agri-voltaic), that would be surrounded by an enhanced landscape structure with biodiversity improvements that are characteristic of the surrounding landscape setting. The construction of the Proposed Development would result in a **Moderate adverse** short-term effect upon the Application Site.

6.26. Overall, the Proposed Development would introduce a new renewable energy feature with a relatively low vertical height, into a relatively simple scaled landscape which has some localised

containment within the wider LCA. This would result in localised **Moderate to Minor adverse** long-term effects within the immediate setting of the Application Site and the host LCA.

6.27. From other adjacent sections of the landscape, effects would be limited with the Proposed Development screened from most of the surrounding landscape. This includes the key focus of valued landscapes and designated areas, which lie beyond the detailed study area.

6.28. The pattern of proposed mitigation and enhancement landscape measures would also aid in retaining and improving the field boundaries and characteristic woodland features which would help to integrate the development into the wider landscape of the surrounding LCAs such that the effect on wider character is considered to be no more than **Moderate to Minor Adverse**.

6.29. All notable direct and indirect effects would therefore arise within just a small section of the LCU *25: South Nottinghamshire Farmlands: Aslockton Village Farmland* context between Hawksworth and Thoroton, with the key character across the large majority of the LCA remaining intact and largely unaffected.

Visual effects

6.30. The following section considers the potential effect of the Proposed Development during the construction, operation (Year 1 and 10), and decommissioning stages upon the existing views and visual amenity on the visual receptor(s) at the selected representative viewpoints and other visual receptors within the study area. An assessment of potential glint and glare effects from the Proposed Development upon the nearest receptors has been undertaken as a separate report within this planning submission. (**See Technical Appendix 7: Glint and Glare Assessment**).

Principal Zones of Theoretical Visibility (ZTV)

6.31. As noted in the baseline, the Application Site would be visible from adjacent areas of undulating farmland, principally between the two villages of Hawksworth and Thoroton and primarily within 250m. This includes farmland towards the settlement edges but beyond the settlement and the small-scale enclosures around the villages. This is due to the variations in landform and landcover patterns in the immediate context surrounding the Application Site.

6.32. The actual level of visibility would be reduced, due to the local landform variations and other landscape elements that would screen views. Visibility would be further reduced over time by the mitigation planting proposed and by the exclusion of panels from the nearest section of the Application Site to the settlement areas. These include:

- western and southern sections of Field 1;
- to the south of Fields 8 and 9; and
- the more elevated section of Field 5.

6.33. As noted in the baseline the principal zones of visibility would be concentrated within the immediate context of the Application Site and adjacent boundary points and up to 160m to the

south and up to 250-280m at isolated points to the northwest and east. With intervening surface features such as vegetation and buildings which are evidenced in the viewpoint panoramas (**Figures 1.4-7 in Appendix 1A and photopanels in Appendix 1C**), clear views are typically limited from most points beyond the Application Site and 160m to the south and 280m to the north and east.

Effects on Representative Viewpoints

6.34. The analysis detailed below refers to the potential visual effects on the eight representative viewpoints identified in the baseline. To help understand the assessment, reference should be made to the viewpoint locations (Figure 1.3, in Appendix 1A), the existing panoramas ((**Figures 1.4-7, in Appendix 1A**), and photomontages (**Figures 8-11, in Appendix 1A**), which demonstrate the existing and proposed view from each location. Two additional viewpoints (A and B) are included as illustrative views to demonstrate other effects. These are included as photo panoramas within **Appendix 1D.**

Viewpoint Number 1: Minor Road, Thoroton.

6.35. **Existing View**: From this location on a minor road on the edge of Thoroton, at approximately 160m to the south of the Application Site, a relatively flat view, stretches across an arable farmland, interspersed by well vegetated field boundaries. These include a mix of mature hedgerows, tree belts and irregular woodland blocks, which form elements on the southern boundary of the Application Site, as illustrated in **Figure 1.4: Appendix 1A**. These features provide varying tiers of enclosure in the view and channel and filter intermittent views to the north. Where views permit, small sections of farmland undulate across the mid distance view. They are also surrounded by further wooded tree belts and well vegetated field boundaries which enclose and define the skyline to the north. This type of view would be gained from an isolated point on Shelton Lane at the field access point, with other views from the road more heavily screened. At other points, views from upper floors of the nearest residential buildings on the northern edge of Thoroton would gain a similar view

6.36. **Predicted Change**: During the temporary construction phase, potential channelled, filtered and partial views of the site works would be gained within the mid distance view to the north including the southern sections of Fields 8 and 9 and to a lesser degree field 6 where construction activities would be partially visible in filtered views for the duration of construction.

6.37. Once operational (Year 1), southern sections of the Proposed Development in Field 8 and 9 would be visible. At this location the panels would be partially visible within intermittent filtered gaps in the mature wooded field boundary vegetation on or adjacent to the southern boundary of the Application Site. They would also appear as a series of low lying repeating elements between vegetated features with views from the front of the panels in Field 8 and 9. In this context they would form a textural change in the series of gaps in the boundary

vegetation with boundary fencing also present, as shown on the visualisation in **Figure 1.8: Appendix 1A**.

6.38. With the establishment of mitigation planting, views over time would comprise existing and proposed vegetation that has been allowed to grow up to varying heights with hedges up to 5-6m and trees up to 8m. As such, the potential for open views would be reduced beyond the short to medium term. This is illustrated by **Figure 8b: Appendix 1A** which shows that by Year 10 the large majority of the development would be heavily screened and the visual amenity retained with characteristic woodland field boundaries.

6.39. From this location to the south, the design evolution of the Proposed Development has incorporated offsets and setbacks to remove solar panels from the nearest foreground field. In doing so, the Application Site boundary has been pushed back by approximately 150-200m to exclude development on the nearest field to Thoroton, so that solar PV panels are more contained within the wooded field boundaries and therefore the potential visual impacts would be reduced from the edge of Thoroton.

Sensitivity of Receptor: High – Medium (Residents away from property curtilage)

Magnitude of Change: Medium (Construction); Medium (Operational Year 1); Very Low (Operational Year 10 and Decommissioning)

6.40. **Assessment of Effects**: The resident's sensitivity and magnitude of change would result in a short term (up to approximately 5 years), **Moderate Adverse** effect (Construction and Year 1). This would be seasonal and views would be more restricted during summer months due to natural growth in vegetation cover. In the short to medium term, the visual impacts reduce as mitigation planting establishes which reduces effects to **Minor Adverse**. Effects are anticipated to be **Minor Adverse** during the medium to long term (Operational Year 10) and until decommissioning.

Viewpoint Number 2: PRoW to Thoroton from minor road (Thoroton FP2)

6.41. **Existing View**: From a minor road on the southwestern corner of Field 8, a series of channelled views are available to the north. They stretch across gently undulating farmland, enclosed by mature hedgerow field boundaries with field boundary trees and woodland belts. These field boundaries break up the view and add degrees of containment and enclosure at various points in the near to mid distance points. Where views permit, the view to the northeast extends to slightly higher ground but is filtered by further field boundary vegetation as illustrated in **Figure 1.4: Appendix 1A**. In this view steel lattice pylons supporting overhead power line traverse the view. In another section of the view, to the northwest, the view drops away slightly towards the lower lying settled edges of Hawksworth. It comprises undulating farmland enclosed by a mix of wooded boundaries, hedgerows and trees.

6.42. **Predicted Change**: During the temporary construction phase, a channelled view of the construction works would be gained within Field 8 where there would be a range of activities and vehicular traffic towards the new access point. There would also be some minor activity at

more distant filtered points, principally in Fields 5 and 6 and in the southern edges of Field 1 to the northwest, but remining sections of the Proposed Development would be heavily filtered and screened by mature field boundaries up to 3-4m and woodland around Fields 8 and 6.

6.43. Once operational (Year 1), the southern edges of the Proposed Development would be visible with near distant views to the edge of Field 8 and in more distant filtered views, to the southern edges of field 1. The remaining sections of the Site and majority of the Proposed Development would then be screened by either intervening tiers of wooded field boundaries or by the nearer edge of solar PV panels in field 8. The panels in Field 1 would also sit in a lower lying context of the mid to far distance view.

6.44. The visibility of the PV panels would be further reduced in the short to medium term and by Operational Year 10 as the mitigation planting and reinforcement of existing field boundaries, becomes established to screen the Proposed Development.

Sensitivity of Receptor: High- Medium (PRoW users)

Magnitude of Change: High - Medium (Construction); High - Medium (Operational Year 1); Low (Operational Year 10 and Decommissioning).

6.45. **Assessment of Effects**: From this isolated point at a field access gate on a minor road adjacent to the Application Site boundary, the sensitivity and magnitude of change would result in a **Major - Moderate Adverse** effect (Construction and year 1) reducing to a **Moderate to Minor Adverse** effect (Operational Year 10 and decommissioning). This type of view would be gained from an isolated section of the PROW and minor road on the southwest corner of the Application Site. From other sections of the PROW to the northwest and southeast, the view would be heavily filtered and screened by existing field boundary vegetation.

Viewpoint Number 3: PRoW Hawksworth, south of Manor Farm

6.46. **Existing View:** From a lower lying viewpoint on the eastern edges of Hawksworth to the west of the Proposed Development. Views would be experienced from the PRoW to the east of Hawksworth, the Conservation Area and also from properties within Hawksworth. From Viewpoint Number 3, a broad undulating view ascends to the east across undulating farmland, interspersed by a mix of wooded enclosures, hedgerows and individual trees. The view is the contained in the mid distance by rising ground and vegetated field boundaries which form a vegetated skyline to the east as illustrated in **Figure 1.5: Appendix 1A**. At lower lying points to the north, large farm buildings and residential properties add a settled character to the view, but are contained by further vegetation patterns within and adjacent to property curtilages.

6.47. **Predicted Change**: During the temporary construction phase, just the tallest elements of the construction traffic and activity would be partially visible for a short period for the construction of the nearest sections of the Application Site on the western boundaries of field 8. The remaining elements would be heavily filtered by existing field boundary vegetation which would be allowed to grow up to 3-4m and by rising ground.

6.48. Once operational (Year 1), the Proposed Development would not be that evident in views from this location, with views to the Proposed Development heavily filtered by existing vegetation. This is also due to the nature of the rising ground to the east and the extent of the proposed setbacks within the western boundaries of field 8, so that the panels sit substantially to the rear of the ridge slopes in the mid distance view. This would help to maintain the character of views across the farmland fringes to the settlement.

6.49. With the establishment of further enhancement planting the potential for any views to the infrastructural elements would be limited further in the short to medium term and up to Year 10. This would comprise a wooded tree belt that is characteristic of the Site landscape. This would help to reinforce the field boundaries and improve their condition.

Sensitivity of Receptor: High - Medium (PRoW users)

Magnitude of Change: Very Low (Construction and Operation Year 1), None, (Operational Year 10 and Decommissioning)

6.50. Assessment of Effects: The sensitivity of PRoW users to the east side of Hawksworth, combined with the magnitude of change would result in no more than a Minor Adverse effect at Construction and at Operation Year 1. This would reduce as mitigation and reinforcement planting matures and by Year 10 the effect would be No change. This type of view would be experienced at other points from the PRoW to the east of Hawksworth, the Conservation Area and also from properties within Hawksworth. Upon decommissioning, views would be restricted to most activities and the effect is also considered to be No Change.

Viewpoint Number 4: Main Road, north side of Hawksworth

6.51. Existing View: From this section of Main Road, to the north of Hawksworth, a broad filtered view is available to the east across an undulating farmland, interspersed with a mix of mature, vegetated field boundary enclosures. The foreground view stretches across, fairly large, lower lying flat fields, before it rises slightly in the mid distance with fields beyond the near ground filtered by the mix of mature field boundaries and woodland blocks. The view is then contained by a relatively flat horizon and largely be vegetated features in the mid distance as illustrated in Figure 1.5: Appendix 1A. The view to the south then stretches to the settled edge of Hawksworth, which at this point is defined by light industrial units which are contained by mature evergreen conifer hedging and a couple of residential properties adjacent to the viewpoint.

6.52. Predicted Change: During the temporary construction phase, construction activity would be clearly visible within the southwestern sections of Field 1 for the duration of the construction period, with more distant, filtered views to activity in Fields 2, 3, 4 and 5. On completion of construction, the setbacks from the southern boundaries of Field 1 would assist in retaining some sections of the views across the southern sections of the field to the east, with new mitigation planting installed in the near distant view.

6.53. Once operational (Year 1), the Proposed Development would be clearly visible within the southwestern extents of Field 1, where the panels would sit in the foreground field (Field 1) and appear as a series of rows with views from the side along these rows. Given the slight set back, they would still be seen just below wooded field boundaries to the east of Field 1 and the panels would screen views to other sections of the site to the east, within fields 3-5, as shown in **Figure 1.9: Appendix 1A**.

6.54. Over time the visibility of the solar panels would be reduced as the mitigation boundary planting in a form of a field hedgerow with boundary trees becomes established along the southwestern boundary of Field 1 as shown in **Figure 1.9: Appendix 1A.** As such, in the medium to long term, with the management of other existing field boundaries around Field 1 and Field 2 the view would be reduced with planting matured up to 3-4m to add further screening and reinforce existing vegetation patterns. In addition, one of the two new proposed permissive bridleway as shown on the Application Site Layout plan within **Volume 2** would also provide some additional access and recreation within this section of the landscape and would connect to the bridleway to the north. These measures would help integrate the Proposed Development into the landscape. By Year 10 the mitigation boundary planting would have become fully established to further screen and filter clear views of the northern sections of the Proposed Development.

Sensitivity of Receptor: High – Medium (residents away from property curtilage)

Magnitude of Change: High (Construction); High (Operational Year 1); Low (Operational Year 10 and Decommissioning).

6.55. **Assessment of Effects**: The sensitivity and magnitude of change would, result in a **Major to Moderate Adverse** effect (Construction and Operation Year 1). However, construction stage effects are considered to be temporary and would only be experienced at this short section of Main Road and from the nearest two properties to the south side of Viewpoint Number 4. At other points existing mature roadside vegetation would restrict views further to the north and the light industrial units restricting views further to the south. In the medium term, **Moderate to Minor Adverse** effects on views (Operational Year 10 and upon Decommissioning) are anticipated due to the establishment of mitigation planting and the 100m offset of the proposed development from Viewpoint Number 4

Viewpoint Number 5: PRoW, east side of Main Road (Hawksworth BW1)

6.56. **Existing View**: From a point on BW1 bridleway adjacent to Main Road and the western boundary of the Application Site in Field 2 a relatively flat view extends east across a single, large field, as illustrated in **Figure 1.6: Appendix 1A**. From this location, the flat foreground view extends to a mix of mature vegetated features beyond the eastern boundaries of Fields 1 and 2. They comprise, woodland blocks, tree belts, hedgerows and field boundary trees and tree lines. These features provide some containment and filter a number of further views to the east, but allow for a longer view to the northeast towards slightly higher ground, which contributes to a low, relatively even, vegetated backdrop in the mid distance.

6.57. **Predicted Change**: During the temporary construction phase, construction activity would be clearly visible within the western sections of fields 1 and 2 for the duration of the construction period, with more distant, filtered views to activity in Fields, 3, 4 and 5 to the east and in a different section of the view across field 1 to the south. The proposed setbacks from the PRoW, would, however, assist in retaining a view along the PROW to the wooded field boundaries to the east, with fencing and new mitigation planting installed either side of the PRoW.

6.58. Once operational (Year 1), the Proposed Development in the northern edges of Field 1 would be clearly visible within the foreground view along with the southwestern sections of the solar panel array in Field 2, with mitigation closest to the PRoW, followed by fencing, either side of the view to the east. However, the fencing would be set back from the western boundary by approximately 5m and also set back from the immediate view along the PRoW by 10m either side of the PROW with the panels set back by approximately a further 5m.

6.59. At this point, the solar PV panels would be seen in views from the rear, in Field 1 to the south of the PRoW and largely to the side of rows of panels to the north of the PRoW in Field 2. To the east the low lying nature of the panels and rising ground to the east would help to retain some views across to the surrounding vegetation patterns that enclose the view, whilst also filtering and screening further views to Fields 4 and 5 to the east and Field 1 to the south as shown in the visual in **Figure 1.10: Appendix 1A**. This would be the type of view at Year 1 and in the short term (up to approximately 5 years). In the medium to long term, and by Year 10, the mitigation planting in the form of new field boundary hedgerows along the PRoW would have matured up to 3-4m to screen, filter and soften views towards the Proposed Development, such that the development would not be that discernible and only visible during winter months in heavily filtered views.

Sensitivity of Receptor: High - Medium (PRoW users)

Magnitude of Change: High (Construction); High (Operational Year 1); Low (Operational Year 10 and Decommissioning).

6.60. **Assessment of Effects**: The PRoW user's sensitivity and magnitude of change would , result in a **Major to Moderate Adverse** effect (Construction and Operation Year 1) which would be temporary and short term (up to approximately 5 years). **Moderate to Minor Adverse** effects are anticipated in the medium and long term (Operational Year 10 and upon Decommissioning) due to the establishment of mitigation planting forming characteristic field boundaries.

Viewpoint Number 6: PRoW, northeast site boundary

6.61. **Existing View**: From this location on a PRoW, approximately 175m to the northeast of the Proposed Development, is a gently sloping view which descends across a large field towards a lower lying farmland area interspersed with a range of landcover elements, including woodland tree belts and hedgerows with field boundary trees. These combine to filter views further towards the southwest and west. To the south, the view extends along the edges of the field boundaries towards the settled area at Thoroton which is defined by a view to the church spire of St Helena's Church as shown on **Figure 1.6: Appendix 1A,** which is present above an otherwise

wooded horizon. To the west and north of Viewpoint 6, the higher ground of the foreground field (Field 5) continues across the foreground and middle distance before falling away to the farmland area interspersed with the vegetation patterns. In the view steel lattice pylons supporting overhead power line traverse the view to the west.

6.62. **Predicted Change**: During the temporary construction phase, construction activity would be clearly visible within the northern sections of Field 5 during the construction period, with more distant, filtered views to activity in Fields 6, 7, 8 and 9 to the south. The proposed setbacks **which include removal of panels from a large area of higher ground around the PRoW would assist in reduces views** from the PRoW and along the eastern margins of Field 5. It would also assist in retaining a view along the PRoW to the west and along the Site boundaries towards the church spire of St Helena's Church at Thoroton, with new mitigation planting installed on the northern side of the Application Site.

6.63. Once operational (Year 1), the Proposed Development would be visible to the south where it would sit on the lower lying sloping ground to the south with a large offset from the PRoW and away from key views to the church spire at this location. The view from Viewpoint Number 6 will include views of the fencing and mitigation planting and views to the rear of the panels. However, through design evolution the solar PV panels have been set back from the PRoW by up to 50-100m so that the Proposed Development is largely set to the rear of the local landform variations. It has also been set back by 10m from the margin of the Field 5 to help protect key views to the south as shown in the visual in **Figure 1.11: Appendix 1A**.

6.64. To the west the low lying nature of the Application Site, beyond the higher foreground area within Field 5, would restrict the potential for clear views to the development in this direction, with views restricted to the development edge within the eastern margin of Field 5 . This would be the type of view at Year 1 and in the short term (up to approximately 5 years).

6.65. In the medium to long term, and by Year 10, the mitigation planting in the form of new field boundary hedgerow, woodland, tree groups and new wildflower meadows along the PRoW would have matured up to 3-4m to screen, filter and soften views towards the Proposed Development, such that the development would be less visible and set within an enhanced landscape framework as shown in the visual in **Figure 1.11: Appendix 1A**.

Sensitivity of Receptor: High - Medium (PRoW users)

Magnitude of Change: High (Construction); High (Operational Year 1); Medium (Operational Year 10 and Decommissioning).

6.66. **Assessment of Effects**: The PRoW user's sensitivity and magnitude of change would result in a **Major to Moderate Adverse** effects (Construction and Operation Year 1) which are considered temporary and short term. **Moderate to Minor Adverse** effects are anticipated in the medium and long term (Operational Year 10 and upon Decommissioning) with the establishment of mitigation planting forming characteristic field boundaries.

Viewpoint Number 7: PRoW, site boundary

6.67. **Existing View:** Viewpoint Number 7 is located on a local road on the eastern boundary of the Proposed Development (Field 7), adjacent to a PRoW (bridleway). Views are of farmland gently sloping to the west. The view across the farmland is interspersed by a mix of vegetated features including small areas of woodland, field boundary hedgerows and field boundary trees. These features provide some containment to the lower lying view and heavily filter and restrict more distant views to the west, as shown on **Figure 1.7: Appendix 1A**.

6.68. **Predicted Change**: During the temporary construction phase, construction activities would be present within fields 5, 6 and 7 and the full range of activities would be visible. The remaining sections of the Proposed Development would be heavily filtered by existing field boundary vegetation and by rising ground and would not be that visible.

6.69. Once operational (Year 1) , the Proposed Development would be clearly visible in the foreground view from this field access gate. This would be to the nearest sections of the Application Site, primarily within Field 7, with views along rows of solar panels and fencing. This is due to the nature of containment from the surrounding fields. From other sections of the road and the PROW to the east, the view would be more heavily filtered and screened by existing field boundary vegetation. These field boundaries would also act to filtered and screen other views towards the Proposed Development from this point.

6.70. Over time with the establishment of further mitigation and enhancement planting along the eastern margins of the Application Site which comprises tree groups and enhancement of existing field boundaries, the potential for any views to the Proposed Development would be filtered.

Sensitivity of Receptor: High - Medium (PRoW users)

Magnitude of Change: High – Medium (Construction); High – Medium (Operational Year 1); Medium - Low (Operational Year 10 and Decommissioning).

6.71. **Assessment of Effects**: The PRoW user's sensitivity and magnitude of change would result in a **Major to Moderate Adverse** effect (Construction and Operation Year 1) which are considered temporary and short term (up to approximately 5 years). **Moderate to Minor Adverse** effects are anticipated in the medium and long term (Operational Year 10 and upon Decommissioning) with the establishment of additional boundary planting and enhancement of field boundaries.

Viewpoint Number 8: Longhedge Lane, at Portland Fishing Lakes

6.72. **Existing View:** From this location to the north, a short ascending view stretches to the south and southeast, across undulating farmland defined by established vegetated field boundaries and interspersed with woodland blocks. The view is focussed to the higher ground to the southeast, with most of the remaining view to the south heavily filtered and screened by mature woodland blocks in the foreground view as illustrated in **Figure 1.7: Appendix 1A**.

6.73. **Predicted Change**: During the temporary construction phase, there would be some activity within the higher ground to the southeast of the view where construction traffic and activity would be partially visible for a short period for the construction of the nearest sections of the

Application Site on the north-western boundary of Field 5. Views of construction activity in Fields 4 and 2 would be heavily filtered by existing mature woodland blocks and by the natural rise in topography.

6.74. Once operational (Year 1), only a small section of the Proposed Development would be evident in the view from this point, with views to the solar panels in the northwest corner of Field 5 and fencing visible across the higher slopes in the mid distance view at approximately 300m distance from the Application Site. From this location the solar PV panels would be seen with views along the rows as they rise up across the Field.

6.75. Over time the establishment of further mitigation and enhancement planting along the ridgeline to the east of the panel array in Field 5 would help to provide a robust framework and screening to views from location.

Sensitivity of Receptor: Medium - Low (Road Users)

Magnitude of Change: Medium (Construction and Operation Year 1), Low, (Operational Year 10 and Decommissioning)

6.76. **Assessment of Effects**: These effects would be experienced from a short section of Longhedge Lane to the northwest of the Proposed Development. The sensitivity of road users on Longhedge Lane, combined with the magnitude of change would result in a **Moderate - Minor Adverse** effects at Construction and at Operation Year 1 which are considered temporary and short term (up to approximately 5 years), . This would reduce in the medium to long term as mitigation planting matures and by Year 10 the effect would be **Minor Adverse**. Upon decommissioning, views would be restricted to most activities and the effect is also considered to be **Minor Adverse**.

Summary of Effects on Visual Receptors Groups

6.77. The visual assessment shows that while a range of visual effects are predicted, there are no major visual effects during operation of the Proposed Development. There are a number of temporary adverse effects during construction and during the short term (up to approximately 5 years). The assessment also shows that geographically, the extent of notable visual effect would be relatively low. It would be restricted principally to intermittent points around the site and to 160m to the south, and 280m northeast and east. This is summarised below for the different key receptor groups.

6.78. From the representative viewpoint assessment above it can be seen that:

- There are no **Major** adverse effects.
- The extent of **Major to Moderate** visual effects, where the Proposed Development would form an extensive change to the composition of the existing view such that the baseline would be fundamentally changed, would be limited to locations either within the Application Site, on PRoWs (ie Vps 5-6) or at locations directly on the Application Site boundary where sensitive receptors are likely to be. This would include isolated

residents to the north of Hawksworth (Vp4) or isolated sections of PRoW (Vps2 and 7). This would be during Construction and at Year 1, in the short term (up to approximately 5 years), before mitigation planting has established;

- Beyond Site boundaries there would be some isolated **Moderate** effects from Shelton Lane on the north side of Thoroton which will again just be in the short term (up to approximately 5 years). These would be isolated and limited or glimpsed views through a field access gate and would not notably interrupt the wider view from the majority of residential receptors within Thoroton;

- Generally, beyond 160m to the south and 280m at isolated points to the northwest and east, adverse visual effects are limited to no more than **Moderate to Minor**. Visual effects will be further limited once the mitigation planting and gapping up of hedgerows along the Application Site has matured. This would filter and screen views of the Proposed Development with characteristic wooded tree belts and hedgerows; and

- Outside these very localised areas, the Proposed Development would largely be screened from visual receptors by a combination of local landform variations and landcover patterns or the Proposed Development would form a very limited change in views, being seen in heavily filtered views with low levels of visibility, particularly from publicly accessible locations.

Visual effects summary

6.79. The detailed viewpoint assessment has indicated some **Major - Moderate** adverse effects during Construction and at Year 1 which would be mitigated after approximately year 5 (short term duration) and in the medium to long term on establishment of mitigation planting. These effects are also restricted to points within or on the Application Site boundaries. The assessment indicates a positive picture regarding the extent of effects upon visual receptors within the wider study area beyond the Application Site. . Adverse effects would also be subject to the season with views more heavily filtered during summer months and in the short to medium term with mitigation planting designed to screen the Proposed Development and enhance the intervening view with characteristic wooded field boundary planting.

6.80. Elsewhere, there would also be short term **Moderate** effects at one further point at approximately 160m to the south which relates to an isolated view through a field access gate. These effects would reduce to no more than **Moderate to Minor** in the medium to long term as the mitigation planting in the form of tree and shrub planting to provide a wooded edge matures and the management of the boundary vegetation around the Application Site is established to provide fuller vegetated screens. The combination of which would further screen, filter and soften views towards the Proposed Development.

6.81. For the remaining representative viewpoints and two illustrative viewpoints, identified effects would be minor or less with views restricted from most points beyond site boundaries to the west, 160m to the south and beyond 280m to the north and east. This is in line with local policy for effect on amenity, particularly residential amenity of adjoining properties or the

surrounding area. When considered together with the effects on all relevant key receptor groups present, including those more sensitive residential receptors and the principal zones of visibility noted above, the overall effect on visual amenity within the Study Area is considered to be acceptable. This is due to the nature and context of the existing setting within a large scale farmland landscape with some set back and separation from the settlements of Thoroton and Hawksworth.

Cumulative Effects

6.82. Cumulative effects are defined in GLVIA3 as;

6.83. *"Result from additional changes to the landscape or visual amenity caused by the Development in conjunction with other developments (associated with or separate to it), actions that occurred in the past, present or are likely to occur in the foreseeable future."*

6.84. Cumulative landscape effects may occur to the landscape components e.g. loss of hedgerows or landscape characteristics by introducing new features.

6.85. Cumulative visual effects may occur where one development is viewed in combination (static views of up to 90-degree arc), successively (turning around on the spot) or sequentially where the user moves along routes, roads or paths with one or more development evident.

6.86. Developments that are subject to a valid planning application are included within such an assessment, where specific circumstances indicate there is potential for cumulative effects to occur, with progressively decreasing emphasis placed on those which are less certain to proceed.

6.87. Typically, operational and consented developments are treated as being part of the landscape and visual baseline. i.e. it is assumed that consented schemes will be built except for occasional exceptions where there is good reason to assume that they will not be constructed. Schemes that are at earlier stages such as scoping are not usually considered within such an assessment unless specifically requested by the planning authority.

6.88. No developments requiring cumulative assessment were identified in this instance.

7. SUMMARY AND CONCLUSION

Residual effects

7.1. As evidenced throughout this LVA, adverse effects arising from the Proposed Development would be limited to the Application Site itself and isolated points on site boundaries. As such there would be no notable effects predicted on wider landscape character areas, landscape designations or receptors beyond these locations, within the study area. Within the Site landscape adverse effects are only predicted during construction and in the short term (up to approximately 5 years).

7.2. The potential residual effects would occur once the proposed landscape mitigation boundary planting has become established by year 10. By this time, mitigation planting along site boundaries would have matured with hedgerows reaching approximately 3-4m and trees reaching up to 8-10m which, along with the existing field hedgerows reaching up to 5-6m, would help to contain the Proposed Development from any potential sensitive close-range views.

7.3. At other points the mitigation and enhancement areas within the northern section of Field 5 and southern sections of Field 1 would have matured to 8-10m to help filter views from key sensitive locations to the north and west. This would soften the edges of the Proposed Development and provide enhanced areas of landscape and visual amenity with characteristic wooded field boundaries and wildflower meadow planting (Field 5), helping to integrate it into the local landscape.

7.4. After the approved operational period ceases, the above ground structures would be removed from the Application Site during decommissioning. The enhanced field boundary hedgerows and environmental enhancement areas to the west would be left in situ which, together with the reversion of the land to its former agricultural use, would have Minor beneficial effects upon the landscape character and quality of the Application Site and surrounding landscape.

Summary

7.5. The Proposed Development would introduce a new medium-scale but vertically low renewable energy feature, combined with the opportunity for dual use in the form of sheep farming, into the rural, landscape between Thoroton and Hawksworth. However, the overall design of the Proposed Development has been very carefully considered within the confines of the nine fields to ensure the effects upon the landscape and visual receptors are limited. This has included several site reductions and setbacks to remove more visible land from points around the two settlements.

7.6. Direct landscape effects would include adding a renewable energy generation land use to the prevailing arable land use. This would diversify the land to agri-voltaic use. The solar PV panel layout has been designed to retain existing vegetation within the Application Site as far as possible and no notable tree or hedgerow sections would be removed. The overall field scale

that is characteristic of the Application Site and the surrounding landscape would remain unchanged and views to surrounding features would be retained from most locations or otherwise more local views improved with a range of new mitigation features.

7.7. On completion of the construction phase, adverse effects arising from the Proposed Development would be limited to the Application Site itself and isolated sections of the immediate site boundaries.

7.8. In the medium to long-term, the proposed landscape mitigation and enhancement planting would help to filter and screen the large majority of the Proposed Development from most of the near distance views, as well as integrating the Proposed Development into the surrounding landscape and provide some enhanced landscape features to the north side of Hawksworth and from the more elevated section of PRoW within the Applications Site to the north of field 5.

7.9. This summary is consistent with the landscape related policy context and objectives for the area where the findings of this LVA demonstrate that the Proposed Development;

- is sensitively sited with a design and layout that positively integrates with its local context;
- conserves and enhances local landscape character;
- protects and enhances Green Infrastructure with greater access, connection and amenity enhancements;
- the historic environment and heritage assets and their settings are protected including Listed Buildings and Conservation Areas;
- protects the settlement pattern and residential amenity; and
- is not visually intrusive, whilst protecting the visual amenity of any residents and users of public rights of way

At the end of the Proposed Development's lifespan, the predicted effects are reversible as the land would be returned to its former agricultural use, similar in form to its current state.