## LANDSCAPE AND VISUAL IMPACT ASSESSMENT

SOLAR FARM, DUNS TEW ENERGY PARK, OXFORDSHIRE

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# **REVISION & REVIEW RECORD**

## **Revision details**

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P01	17/10/2019	Preparation for First Circulation	СВ	KmJ
P02	24/10/2019	Minor Comments and Clarifications	СВ	KmJ
P03	19/11/2019	Minor Changes in Relation to Site Boundary Change and Solar Panel amendment	СВ	KmJ

#### **Review record**

Rev	Date	Reviewers comments or page references	Initials / organisation
P02	24/10/2019	Minor comments across the document	TD IPVFlexgen

## INTRODUCTION

# ONE

## 1.1 Appointment and Brief

- 1.1.1 Applied Landscape Design was appointed by Greenheath NRG Ltd in August 2019, to carry out a Landscape and Visual Impact Assessment for a field and access route within land owned by Hill Farm, Duns Tew, Oxfordshire. With a view to understanding how it is visually placed within the landscape and enable recommendations on how the proposed new 8.92MW solar farm and associated infrastructure for the field should be implemented.
- 1.1.2 Applied Landscape Design is also a registered practice of the Landscape Institute.

#### 1.2 The Site / Ownership Extent

- 1.2.1 The development site is situated at Hill Farm to the north of Duns Tew. The development site is 12.82 hectares located across the northern portion of 2 large semi arable fields, situated to the north of Hill Farm. The access track that will be used for the build of the solar farm connects the Oxford Road (A4260) to the east of the site, this track follows the existing well used farm tracks. Once built the site will be accessed via the existing access track that runs to the current solar farm. Refer to drawing ALD848/LD1011.
- 1.2.2 Both portions of the fields that are proposed to be covered by solar panels are currently a mixture of arable out of the flood plain (southern aspect) and grass within the flood plain (northern aspect). The boundary to the north and northeast is this buffer of pastoral land associated with the local stream and its related vegetation (this is well treed), to the southeast and south there is no formal boundary just the remainder of the 2 large fields and a redundant hedgerow, to the west the existing solar farm and its 2m high deer fencing form the boundary.
- 1.2.3 The left-hand field slopes gently from a southwest to northeast direction towards the stream at approximately 89m AOD to 86m AOD. The right-hand field slopes with a slightly greater incline from a south to north direction towards the stream at approximately 92m AOD to 86m AOD See drawing ALD848/LD1012 for photos of the field.
- 1.2.4 The access track for the build is anticipated to be in the order of 3m wide and follows the existing farm tracks off the Oxford Road (A4260). It is likely that the route will be lined with some hardcore, and the visibility splay connecting this track onto the Oxford Road will need to be improved, but no other changes are anticipated. As you follow the track off the Oxford Road, there is open arable fields to the south and hedgerows / trees to the north. The access track follows the local topography so varies in height from approx. 100m AOD at the Oxford Road to 88m AOD at the eastern edge of the solar farm.
- 1.2.5 As part of this application the solar farm is required to be connected to the main grid via the SSE Substation that is situated next to the western edge of the existing solar farm. This will be in the format of cables dug in shallow trenches 800mm max below the ground.

## 1.3 The Study Area

- 1.3.1 The Landscape and Visual Impact Assessment zone is illustrated on drawing ALD848/LD1000 and can be found in the Appendices to the back of this document.
- 1.3.2 The study area comprises an area within a circa 3km radius from the site within which the visibility of the site is assessed. Due to topography, built settlement, high hedgerows and woodland tracts the study area is an even spread to the north, east, south and west, with the farthest viewpoint being at about the 1.5km mark.
- 1.3.3 The study area comprises an area within a 3km radius from the development site and extends:
  - To the north and northeast mid way between Deddington and Adderbury Villages
  - To the east Somerton Village and the Oxford Canal
  - To the southeast and southwest Steeple Aston and Middle Barton Villages
  - To the west Nether Worton and Ledwell Villages

#### 1.4 **Proposed Scheme**

- 1.4.1 Current proposals are for a PV Solar Farm, covering an area of 12.82 hectares and its associated access track. The proposed development will involve the construction and operation of an array of solar panels with a total installed capacity of 8.92MW. The renewable electricity generated will be distributed back into the Local Distribution Network. This will involve:
  - 26,236 photovoltaic panels;
  - 2 inverter/transformer units (6.1m in length, 2.6m in height and 2.4m wide);
  - 2 inverter/transformer units (12.2m in length, 2.6m in height and 2.4m wide);
  - 1 spares container unit (6.1m in length, 2.6m in height and 2.4m wide);
  - 1 customer substation unit (4.58m in length, 2.40m in height and 2.5m wide) will house equipment required to convert the direct current PV output into usable AC power
  - Pole mounted Infra-red CCTV cameras located within the perimeter fence to be mounted on galvanised steel poles 3m above ground level at a maximum of 65m apart;
  - Approximately 1900m of perimeter security fencing; and
  - An informal 3m wide 450m long access track for the purpose of building the solar farm only.
- 1.4.2 Around the perimeter of the main field there will be a 5m minimum standoff distance from the boundary to ensure protection of the existing field boundary hedgerow and to ensure sufficient space is left for maintenance purposes once operational. For security purposes, a perimeter fence will be installed at the 5m standoff distance and will be constructed of standard deer fencing to minimise visual impact. The fence will be 2m tall and will be supported by wooden fence posts located at 4m intervals. Secure 2m tall steel mesh gates will be installed at the points where access is gained from the main field.

- 1.4.3 Access to the site will be gained from an existing farm access track from the Oxford Road (A4260) which will be improved, and visibility splays added following the Construction Traffic Management Plan. Materials will be off loaded into a temporary compound and transported to site on trailers.
- 1.4.4 There will be no external artificial lighting installed as part of the proposed development.
- 1.4.5 To connect the solar panels with the grid, the wiring will be secured above ground to the back of the supporting frames. Shallow trenches will be dug to a maximum depth of 800mm to accommodate wiring for the connection between the arrays to the inverters / transformers and the customer sub-station, which in turn will be connected to the existing DNO substation
- 1.4.6 The planting scheme which is outside the red line boundary, is an additional benefit of the proposal, but is not necessary to make the planning proposal acceptable. To confirm no planting is offered within the planning application boundary.
- 1.4.7 The proposed solar farm has a 40 year asset life, after this point the site will be cleared and reverted back to agricultural land in full.

## 1.5 Scope of Assessment

- 1.5.1 This LVIA report is split into nine sub-sections;
  - This first section provides an introduction to the assessment.
  - The second section sets out the landscape and visual policy context for the scheme.
  - The third section describes the assessment methodology that has been adopted and the consultation that has been carried out in relation to landscape and visual issues.
  - The fourth section consists of a landscape baseline study for the existing site and its surroundings. This breaks the landscape down into component parts, making it easier to understand and identify any elements or features that might be particularly sensitive to the proposed development.
  - The fifth section consists of a visual baseline study for the existing site and its surroundings. This highlights locations sensitive to development and is presented as viewpoints located at different points throughout the study area along with a brief explanation of their existing status quality.
  - The sixth section sets out the potential landscape and visual impacts that the scheme could have without any mitigation, including construction phase landscape and visual effects and potential effects on the completion of the scheme.
  - The seventh section describes the landscape and visual mitigation measures that are either inherent to the scheme (design developed during the EIA process) or additionally proposed.
  - The eighth section provides an assessment of the cumulative landscape and visual effects of the application scheme and other associated development proposals in the vicinity.
  - The ninth section is a summary of all conclusions and recommendations.

# LEGISLATION

# TWO

## 2.1 Introduction to Planning Context Analysis

- 2.1.1 This section briefly outlines planning issues specifically relevant to landscape matters within the general study area and site. Specific reference should be made to drawings ALD848/LD1003 Surrounding Site Context located in the Appendices.
- 2.1.2 The proposed site lies within the Duns Tew Parish, within the county of Oxfordshire. The Adopted Cherwell Local Plan 2011-2031 Part 1 (July 2015), The Cherwell District Adopted Local Plan 1996 Saved Policies (adopted 1996) and the West Oxfordshire Local Plan 2031 (adopted September 2018) have been used for the basis of the information collated.
- 2.1.3 The application site does not sit within any planning designations specific to the landscape. The site does sit close to Listed Buildings and Conservation Areas.

## 2.2 International and National Landscape Designations

2.2.1 The application site does not fall within any international or national landscape designations, however local designations such as Conservation Areas and Listed Buildings can be found within the 3km study area.

#### 2.3 Local Landscape Designations

- 2.3.1 The site itself does not lie within a local landscape designation, however, within the 3km study area there are areas that include;
  - Conservation Areas
  - Public Right of Ways (PROWs)
  - Listed Buildings

## 2.3.2 <u>Conservation Areas</u>

2.3.3 Eight Conservation Areas are found within the 3km study area. Duns Tew is the closest to the south, just over 1km from the site. Deddington and North Aston found to the north and east respectively are then located at the 1km distance. Steeple Aston, Rousham, Ledwell and Somerton can be found at the 3km distance in the southeast. And Barford St Michael Conservation area is to the northwest at 3km. See drawing ALD848/LD1003 for the exact location.

#### 2.3.4 Public Rights of Way (PROWs)

2.3.5 Within a 1km radius of the site there are more than 10 Public Rights of Way, consisting of Footpaths, and Bridleways. These are evenly scattered around the site, linking up the villages / hamlets to the local roads. As illustrated on drawing ALD848/LD1002 only 3 Public Right of Ways are within 500m of

the main field, this includes one Footpath which follows the first couple of hundred meters of the access track from Hill Farm Lane.

2.3.6 Beyond the 1km distance from the site, there are numerous Public Rights of Way in the form of Footpaths, Restricted Byways and Bridleways. They are spread evenly over the study area creating a good network of local paths. The Oxford Canal Walk National Trail follows the route of the canal and can be found to the east of the study area at the 3km zone.

## 2.3.7 Listed Buildings

2.3.8 There are no listed buildings found within the site. There are however two barns located approximately 60m northeast from the main Hill Farmhouse which are listed the have a Grade II listing and Historic England described them as:

Probably early C18. Limestone rubble with wooden lintels and some ashlar dressings; Welsh-slate and corrugated-iron roofs. 4-bay and 3-bay plans. Larger barn has a porch set to left of centre and has opposed double doors to rear; steep-pitched roof has marlstone gable parapets with projecting moulded kneelers. Smaller barn is lower with a Welsh-slate roof, and has central full-height doors with lower doors to rear. Interiors. Butt-purlin roofs with through tenons; smaller barn has lofted end bays.

2.3.9 Within the 3km study area there are numerous listed buildings, the closest of which can be found within the village of Duns Tew. Beyond this, the settlements of North Aston, Steeple Aston, Somerton, Deddington, Hempton, Barford St Michael and Over Worton all contain listed buildings. There are also several listed buildings at farmsteads and hamlets scattered evenly throughout the area.

#### 2.3.10 Local Nature Reserve

2.3.11 There are no local nature reserves found within the development site, or within the study area.

## 2.4 Wider Context

- 2.4.1 The following features fall within a 3km study area of the site:
  - Ancient Woodlands and Tree Preservation Orders
  - Scheduled Ancient Monuments (SAM)
  - Site of Special Scientific Interest (SSSI)

#### 2.4.2 Ancient Woodlands and Tree Preservation Orders

2.4.3 No Ancient Woodlands or Trees with Tree Preservation Orders (TPO's) are found within the site. There are trees however within the 3km wider study area, which are protected by TPO's, though they are of sufficient distance away from the development site area to not be impacted upon. One Ancient Woodland (Worton Wood) can be found to the southwest of the study area at approximately 2km from site.

## 2.4.4 <u>Scheduled Ancient Monuments (SAM)</u>

- 2.4.5 No Scheduled Ancient Monuments are found within the site, however three are found within the 3km Study Area. The closest SAM is found to the northwest of the site at approximately 1.25km, this is described as Ilbury Camp hillfort. It is situated on a prominent ridge in the area; the site commands clear views of the surrounding terrain in all directions.
- 2.4.6 The second is Deddington Castle found in Deddington Village at 1.75km distance. The third is an Anglo-Saxon burial mound immediately north of Over Worton Church Graveyard at a distance of 2km from site in the west. See drawing ALD848/LD1003 for the exact location.

#### 2.4.7 Site of Special Scientific Interest (SSSI)

- 2.4.8 There are no SSSI's found within the development site. Within the 3km study area 4 SSSI sites are found. The closest being to the south between Duns Tew and Horsehay Farm, it is known as Horsehay Quarries and has been preserved for its geological features. This SSSI is approximately 1.5km from site.
- 2.4.9 The other SSSI's can be found to the east (Best Moor) and south (Middle Barton Fen) at the 3km distance. The exact location of the SSSI's can be found on drawing ALD848/LD1003

#### 2.5 Landscape Character

- 2.5.1 The site is located in Oxfordshire; approximately 13km to the south of Banbury and 26km to the north of Oxford, and the access track starts immediately adjacent to the north-eastern edge of Duns Tew.
- 2.5.2 According to Natural England National Character Areas (2012), the site at Hill Farm is found within the National Character Area 107 Cotswold's. The Cherwell District Landscape Assessment (1995) further defines the site as being within the Ironstone Hills and Valleys. The key characteristics for the character area are very typical of the landscape observed on the site visit.
- 2.5.3 The Oxfordshire Wildlife and Landscape Study (OWLS) is the current Landscape Character assessment for the County of Oxfordshire it builds on the 1995 assessment, it considered an investigation of landscape character and biodiversity within Oxfordshire. The main fields of the solar farm and the build access track is in the Clay Vales Landscape Type.

#### 2.6 Landscape Features

- 2.6.1 This section briefly outlines issues specifically relevant to landscape matters both within the site and in the context of the general study area. Specific reference should be made to drawing ALD848/LD1004 contained within the Appendices.
- 2.6.2 The development site is situated at Hill Farm to the north of Duns Tew. The development site is 12.82 hectares located across the northern portion of 2 large semi arable fields, situated to the north of Hill Farm. The access track that will be used for the build of the solar farm connects the Oxford Road (A4260) to the east of the site, this track follows the existing well used farm tracks, there is open arable

fields to the south and hedgerows / trees to the north. The access track follows the local topography so varies in height from approx. 100m AOD at the Oxford Road to 88m AOD at the eastern edge of the solar farm. Refer to drawing ALD848/LD1011.

- 2.6.3 Both portions of the fields that are proposed to be covered by solar panels are currently a mixture of arable out of the flood plain (southern aspect) and grass within the flood plain (northern aspect). The boundary to the north and northeast is this buffer of pastoral land associated with the local stream and its related vegetation (this is well treed), to the southeast and south there is no formal boundary just the remainder of the 2 large fields and a redundant hedgerow, to the west the existing solar farm and its 2m high deer fencing form the boundary.
- 2.6.4 The left-hand field slopes gently from a southwest to northeast direction towards the stream at approximately 89m AOD to 86m AOD. The right-hand field slopes with a slightly greater incline from a south to north direction towards the stream at approximately 92m AOD to 86m AOD See drawing ALD848/LD1012 for photos of the field.
- 2.6.5 The whole area surrounding the development site and Duns Tew Village is an open rural landscape typical of the character of the region, comprising a mosaic of active arable fields, improved grassland, sparsely scattered woodlands and local lanes contained either side by hedgerows. The development site is consistent with character of the surrounding area.
- 2.6.6 To the east, is a recently planted area of young woodland that is healthy and thriving. To the south the site abuts the pastoral / arable fields also in the ownership of Hill Farm. To the south beyond the Hill Farm the village of Duns Tew can be found. In the west beyond the immediate boundary with the adjacent solar farm is a small mature woodland copse. To the north a small stream forms the northern boundary of the site, beyond this there are numerous arable and pastoral fields and Plumdon Lane Bridleway.
- 2.6.7 Views into site are available at localised locations within approximately 1.5km of site.
  - To the north of site, Tomwell Farm and spot locations on Plumdon Lane afford views into site at a distance of 0.5km, some of these being oblique angles to the general direction of travel.
  - To the east, views into site are limited, and generally long distance. Where glimpses are gained from the A4260 across the fields these are associated with vehicular locations where people will be passing gates and gaps in hedges.
  - In the south, views from properties situated to the northern edge of Duns Tew Village are limited, it is believed that properties along Hill Farm Lane may have fragmented or obstructed views of a small proportion of the site.
  - To the west, views can be glimpsed from the local roads such at the one between Duns Tew and Hempton and it is believed that properties along this road may have fragmented or obstructed views of a small proportion of the site.
- 2.6.8 The character of the site is similar to the wider farm / village context of the area.

## 2.7 Summary

2.7.1 In conclusion, the site is not situated within any International, National or Local designations, however the 3km study area does contain several designations that must be recognised and relevant policy objectives should be met.

## METHODOLOGY

# THREE

#### 3.1 Summary of Approach

- 3.1.1 The format of this assessment and the methodology employed accords with the 'Guidelines for Landscape and Visual Impact Assessments' by The Landscape Institute and the Institute of Environmental Management and Assessment, 3rd Edition published April 2013 and Natural England (NE) with Department for Environment, Food and Rural Affairs (DEFRA). Landscape and Sea Scape Character Assessments (October 2014)
- 3.1.2 The study comprises:
  - A desktop review of current statutory and non-statutory documents;
  - A landscape assessment of the wider context of the site including an analysis of character, quality and sensitivity, and the identification of key viewpoints;
  - An assessment of the site and its immediate landscape setting;
  - An understanding of views affected by the proposed development;
  - A description of the proposed scheme.
- 3.1.3 Documents reviewed / consulted in undertaking the study include:
  - The Adopted Cherwell Local Plan 2011-2031 Part 1 (July 2015)
  - The Cherwell District Adopted Local Plan 1996 Saved Policies (adopted 1996);
  - West Oxfordshire Local Plan 2031 (adopted September 2018);
  - National Character Areas Character Map Natural England;
  - Cherwell District Landscape Assessment (November 1995);
  - Oxfordshire Wildlife and Landscape Study (OWLS 2004);
  - West Oxfordshire Landscape Assessment (May 1998);
  - Magic.defra.gov.uk (Multi Agency Geographical Information for the Countryside);
  - Aerial maps;
  - OS Explorer Maps 191 (Banbury, Bicester and Chipping Norton) and,
  - Client provided detailed topographic survey (digital).
- 3.1.4 Use was made of the mapping information and data to identify a selection of potential viewpoints (receptors). This selection of potential viewpoints, and any others identified during the fieldwork were then visited and assessed for their overall potential sensitivity to low level residential development (positioning and arrangement of potential housing on the site unknown / not established at the time of the study in that the study is to inform the appropriate positioning within the landscape to minimise impacts.).

- 3.1.5 No specific formal consultations have been undertaken with respect to the landscape and visual aspects of the potential development, other than reference to planning guidance and published landscape character assessments
- 3.1.6 We have also reviewed the previous LVIA carried out by ourselves Applied Landscape Design for the adjacent Solar Farm (Landscape and Visual Impact Assessment Solar Farm, Hill Farm Duns Tew, Oxfordshire 19<sup>th</sup> June 2015) The 2015 report was used as the starting point for this current assessment, but as shown on the View Locations Plan ALD848 LD1014 2 views (VP6 and VP7) were no longer valid and one view (VP9) was omitted as a better viewpoint (VP13) presented itself when out in the field.
- 3.1.7 The field work for the assessment was carried out on the 17<sup>th</sup> January 2019 during the daytime. The weather conditions experienced were constant in nature with sun, light winds and a sprinkling of snow on the ground. The conditions for the visit were considered suitable for undertaking the landscape and visual appraisal assessment.
- 3.1.8 Photographs illustrating views from a select series of viewpoints (potential receptors) were taken during the site visit, using a Nikon D3200 digital camera set to the equivalent of a 33mm focal length, which is the equivalent of 50mm film camera lens (equivalent of human eye) on automatic setting. The nature of the views are relatively wide panoramas and it is therefore considered beneficial to present the photographs as so where these panoramas consist of three or four images, the frames have been overlaid using Adobe Photoshop Software (Creative Cloud).

## 3.2 Methodology of Landscape and Visual Baseline Studies

- 3.2.1 Landscape Baseline Methodology
- 3.2.2 By analysing the character of an area, its principal features and elements can be identified. Once these elements are identified, potential impacts caused by proposed development can be measured and a judgment made as to the overall effect this may have on the local landscape character.
- 3.2.3 The Countryside Agency guidelines (*Swanwick et al, 2002*) make a clear distinction between the characterisation process (in which the attributes of the landscape are described) and the judgement-making process. The landscape baseline section of the assessment deals with the characterisation process, and later sections make judgements about the potential effects of the proposed development based upon the characterisation.
- 3.2.4 This is also to be read in conjunction with Natural England (NE) with Department for Environment, Food and Rural Affairs (DEFRA). Landscape and Seascape Character Assessments (October 2014) that provides a brief introduction to Landscape Character Assessments.
- 3.2.5 Existing landscape character assessments are an important starting point for any new assessment, due to the hierarchical nature of character assessment.

- 3.2.6 "Ideally assessments at different scales should fit together as a nested series or a hierarchy of landscape character types and/or areas so that assessment at each level adds more detail to the one above" (Swanwick et al 2002, par. 2.14).
- 3.2.7 The study of landscape assessments at different strategic levels is important for a number of reasons:
  - it aids the understanding of the landscape at a wider level;
  - it allows the identification of landscape elements that may be present at a number of different scales and thus of higher importance;
  - it highlights landscape character that is 'out of context' with other levels of the hierarchy;
  - it may identify potential mitigation and restoration options that may not be present at the local scale, but can be beneficial at a higher level. The landscape character of the site and its surroundings should be assessed according to the above principles.
- 3.2.8 The assessment is also carried out in accordance with Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity (Ref 10.3).

## 3.2.9 Landscape Evaluation

3.2.10 The table below provides five evaluation components to assess the landscape character situation of the Assessment Site and its surroundings. Through assessing these components, the existing landscape character's capacity to accept change will be identified. These components are defined with reference to best practice guidance on character assessment.

Table 1: Landscape Evaluation		
Landscape Component	Description	
Landscape Character	The distinct and recognisable pattern of elements made up from landscape components that create a sense of place. It is a reflection of the geology and soils, landform, land use, built form and human activity	
Landscape Value	The importance of an area on a national, regional or local scale. In terms of planning policy, value is recognised through designations. At a community level, recognition of value may occur without formal designation, and encompasses subjective and perceptual aspects such as scenic quality, tranquillity, wildness, cultural associations or conservation	
Landscape Condition	Equivalent to quality, this is the physical state of the landscape, or townscape, its intactness, and the state of repair of the features and elements that together make up its character	
Landscape Sensitivity	The sensitivity refers to the nature of the receptor the character and quality and the extent to which these factors will be tolerant of change in general and be able to recuperate from loss or damage	
Landscape Capacity	The ability of an area to accept change without significantly affecting its character	

3.2.11 Through providing a concise description of the existing landscape elements (such as topography, vegetation, urban grain, and built form mass and scale), an understanding of distinct character areas, which share common features and characteristics will be identified. These areas have recognisable patterns of elements, which together create the particular sense of place for the Assessment Site and its surrounding landscape.

## 3.2.12 Landscape Value

3.2.13 The value of the identified landscape character areas is assessed using the criteria set out in Table 2. The value is based on and takes into account what is important within this landscape and whether it is of value at a national, regional or local level. Part of the assessment decisions are made as to whether the Assessment Site is special, distinctive and representative, or include, characteristic features relating to the areas national, regional or local character assessments defined character.

Table 2: Landscape Value			
Value	Typical criteria	Typical scale of importance/ rarity	Typical examples
Exceptional	High importance and rarity. No or limited potential for substitution	International, National	World Heritage Site, National Park, AONB, Grade I and Grade II* listed buildings
Major	High importance and rarity. Limited potential for substitution	National, Regional, Local	AONB, Scheduled Monuments, Conversation Area, Grade II listed buildings Register Park and Gardens
Moderate	Moderate importance and rarity. Limited potential for substitution	Regional, Local	Undesignated but value perhaps expressed through non-official publications or demonstrable use
Minor	Minor importance and rarity. Considerable potential for substitution	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement
Poor	Minor importance and rarity	Local	Areas identified for recovery

#### 3.2.14 Landscape Condition

3.2.15 The condition of the identified Landscape Character Area is assessed using the criteria set out in Table3. The condition refers to the state of the individual area and is described as factually as possible.

Table 3: Landscape Condition	
Condition	Criteria
High	Where the area is in good repair/quality.
Moderate	Where the area is in average repair/quality.
Low	Where the area is in poor repair/quality.

#### 3.2.16 Landscape Capacity

3.2.17 Finally, the baseline Landscape Character Assessment considers the identified character area's capacity to accept change. Here, the degree to which the identified character areas can accept change without a detrimental effect is established. These findings will contribute to the effects section of this assessment. The capacity of the area to accept change will be assessed as high, moderate or low as defined in Table 4.

Table 4: Landscape Capacity		
Capacity	Criteria	
High	Where the character area can accommodate significant levels of change without significant effect on its landscape character.	
Moderate	Where the character area can accommodate a degree of change without significant effect on its landscape character.	
Low	Where the character area can only accommodate a small amount of change without significant effect on its landscape character.	

#### 3.2.18 Sensitivity of Landscape Resource

- 3.2.19 The determination of landscape sensitivity is an important part of the LVIA process. Sensitivity combined with the magnitude of impact, which will be assessed later, allows assessing the overall significance of the landscape effects.
- 3.2.20 The overall sensitivity of the existing landscape resource is based on the following factors:
  - The value placed on a landscape;
  - The quality placed on the landscape;
  - Compatibility of the proposed development with the existing land-uses and landscape character;
  - Condition of the landscape;
  - Contribution of the landscape within the site to the overall landscape character;
  - The scope for mitigation of the proposed scheme; and
  - Degree to which landscape elements and characteristics can be replaced or substituted.

Table 5: Landscape Sensitivity	
Sensitivity	Criteria
High	The landscape character area has an exceptional or major value and a high to moderate condition and therefore would not be tolerant of change.
Moderate	The landscape character area has a moderate to minor value and a moderate condition and therefore would be tolerant of some change.
Low	The landscape character area has a moderate to poor value and a moderate to low condition and therefore would be tolerant to change.

## 3.2.21 Visual Baseline Methodology

- 3.2.22 An initial study of Ordnance Survey Map 191 Banbury, Bicester and Chipping Norton (1:25,000) was carried out to identify potential viewpoints and areas for investigation based on the following criteria:
  - Distance from the scheme to the receptor;
  - The proportion of the development visible as well as the absolute visibility of the scheme;
  - The height of the development relative to the receptor with reference also to the scale of other features in the view;
  - The number and character of elements which would be lost from or added to the view;
  - High concentrations of viewers, such as settlements, local recreational facilities, PROWs etc;
  - Views illustrating the visual character of the surrounding area.
- 3.2.23 **Viewpoints** are selected on the basis of which points provide the clearest views of the site and are also the most accessible to the public.
- 3.2.24 A total of **10** viewpoints have been recorded to illustrate the general range of visibility across the study area, as well as viewpoints with the potential to suffer most impact from the development. Use was made of desktop study to identify potential viewpoints. The identified viewpoints were then visited and assessed for their sensitivity to the proposed development.
- 3.2.25 In 2015 there was an LVIA carried out by ourselves Applied Landscape Design for the adjacent Solar Farm (Landscape and Visual Impact Assessment Solar Farm, Hill Farm Duns Tew, Oxfordshire 19<sup>th</sup> June 2015) The 2015 report was used as the starting point for this current assessment, but as shown on the View Locations Plan ALD848 LD1014 2 views (VP6 and VP7) were no longer valid and one view (VP9) was omitted as a better viewpoint (VP13) presented itself when out in the field.
- 3.2.26 The site visit was carried out on the 17<sup>th</sup> January 2019. The weather conditions experienced were constant in nature with sun, light winds and a dusting of snow on the ground. Visibility was acceptable for assessing all types of views.

#### 3.2.27 Sensitivity of Visual Resource

- 3.2.28 Sensitivity of the visual resource depends on the following factors:
  - The location and context of the viewpoint. For example, viewpoints which are closer to the site are generally more sensitive;
  - The number of users who commonly use the viewpoint. Some viewpoints are commonly used by the public, such as formal viewing platforms, picnic areas or recreational rights of way. Other viewpoints may be difficult to gain access to;
  - The nature of the viewpoint. Residents are sensitive to visual impacts as they experience the impacts on a regular and prolonged basis. Public footpaths can also be sensitive, since the users' attention is often focused on the landscape. By contrast, views from outdoor sport facilities, transport routes or places of work are less sensitive;
  - Movement of viewers at the viewpoint. More transitory views, for example users of a motorway, are generally less sensitive than views experienced by residents from residential properties and footpaths that are more sensitive;
  - The cultural significance of the viewpoint. Including its appearance in guidebooks and tourist maps, or the strength to its relationship with cultural and historical associations.

Table 6: Sensitivity of Viewpoint	
Significance	Criteria
High	Residential properties, public footpaths, bridleways, public buildings, culturally sensitive areas. This significance is reduced to moderate if viewed behind a retail or employment site
Moderate	Retail and employment sites, sports and recreational facilities. Roads, railways and motorways.
Low	Industrial sites, outdoor sports facilities and agricultural land

#### 3.3 Assessment Methodology and Criteria

- 3.3.1 Having assessed the landscape and visual baseline and identified the potential elements of the development likely to cause change to that baseline, a detailed assessment of the possible changes to all identified landscape and visual receptors can be made.
- 3.3.2 In order to assess the significance of effects, an assessment of the magnitude of the impact is necessary. The magnitude of <u>landscape impacts</u> depends upon the following factors (LI and IEMA, 2013):
  - The scale or degree of change to the existing landscape resource;
  - The nature of the change caused by the proposed scheme (for example beneficial or adverse);
  - The timescale or phasing of the proposed scheme.

- 3.3.3 For each of the viewpoints the potential magnitude of the residual visual impacts, of both construction and completion of the development, have been assessed. The magnitude of <u>visual impacts</u> is mainly dependent upon the following factors (LI and IEMA, 2013):
  - What proportion of the existing view would change as a result of the development proposals?
  - How many features or elements within the view would be changed?
  - How appropriate is the proposed scheme in the context of the existing views?
  - How many viewers would be affected by the changes in the view?
  - What is the timescale of the proposed scheme? Also, is it continuous or intermittent?
  - What is the angle of the view in relation to the main activity of the receptor?
- 3.3.4 The magnitude of change for each viewpoint should be assessed for both construction of the scheme and its completion.
- 3.3.5 The magnitude of change for both landscape and visual impacts can be categorised as:
  - **High** The proposed scheme would completely change the character and/or appearance of the landscape for a long period of time or permanently. It would affect many receptors;
  - Moderate The proposed scheme would cause a noticeable difference to the landscape, and would affect several receptors;
  - Low The proposed scheme would cause a barely perceptible impact, and would affect few receptors;
  - **Negligible** The proposed scheme is appropriate in its context. It may be difficult to differentiate from its surroundings and would affect very few or no receptors.
- 3.3.6 The potential significance of landscape and visual impacts is determined by a combination of the magnitude of the potential impact and the sensitivity of the landscape and visual setting to change. These two variables can be correlated as illustrated in Table 7, below.

Table 7: Impact Magnitude Matrix Sensitivity of Receptor						
Magnitude of	Sensitivity of Receptor					
Change	High	Moderate	Low			
High	Major	Major/Moderate	Moderate			
Moderate	Major/Moderate	Moderate	Moderate/Minor			
Low	Moderate	Moderate/Minor	Minor			
Negligible	Not Significant	Not Significant	Not Significant			

3.3.7 The above consideration of the sensitivity of the receptors with the magnitude of the potential impacts provides an overall assessment of the potential significance of impacts. This process is not however a quantitative process; there is not an absolute scoring system. Instead, the correlation of the two factors,

although reflecting recognised features and methods of working outlined in this report, is in the end a matter of professional judgement.

3.3.8 Table 8 provides a brief definition of the significance criteria. It must be emphasised that both landscape and visual impacts can be either adverse or beneficial in nature except the situation where no change is predicted and in this case the impact is assessed as not significant – neither beneficial nor adverse.

Table 8: Significance	Criteria
Level	Description
of Significance	
Major	Very large or large change in environmental or socio-economic conditions. Effects, both adverse and beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving national, regional or local objectives, or, could result in exceeding of statutory objectives and/or breaches of legislation.
Moderate	Intermediate change in environmental or socio-economic conditions. Effects that are likely to be important considerations at a local level.
Minor	Small change in environmental or socio-economic conditions. These effects may be local issues but are unlikely to be of importance in the decision making process.
Not Significant	No discernable change in environmental or socio-economic conditions. An effect that is likely to have a negligible or neutral influence, irrespective of other effects.

- 3.3.9 Following their identification, significant effects have been classified on the basis of their nature and duration as follows:
  - Site Specific Effects that result from a geographically localised impact;
  - Wider Effects that are individually significant at a regional level, but which are unlikely to be significant locally;
  - **Beneficial** Effects that have a positive influence on receptors and resources;
  - Adverse Effects that have a negative influence on receptors and resources;
  - **Temporary** Effects that persist for a limited period only (due for example, to particular activities taking place for a short period of time);
  - Permanent Effects that result from an irreversible change to the baseline environment (e.g. landtake) or which persist for the foreseeable future (e.g. noise from regular or continuous operations or activities);
  - **Direct** Effects that arise from the impact of activities that form an integral part of the scheme (e.g. direct employment and income generation);
  - Indirect Effects that arise from the impact of activities that do not explicitly form part of the scheme (e.g. offsite infrastructure upgrades to accommodate the development);

- **Secondary** Effects that arise as a consequence of an initial effect of the scheme (e.g. induced employment elsewhere); and
- **Cumulative** Effects that can arise from a combination of different effects at a specific location or the interaction of different effects over different periods of time.
- 3.3.10 Short to medium-term impacts are normally considered to be associated with physical construction, and long-term impacts are normally associated with a fully occupied and operational scheme.

## 3.4 Limitations and Assumptions

- 3.4.1 The principal assumptions and limitations for this assessment are as follows:
  - Baseline conditions have been established using existing assessments, available documentation and field assessment; it is important to note that this information may change before or during the construction and operation of the proposed development.

## 3.5 Consultation

- 3.5.1 No specific formal consultations have been undertaken with respect to the landscape and visual aspects of the potential development, other than reference to planning guidance and published landscape character assessments.
- 3.5.2 In 2015 there was an LVIA carried out by ourselves Applied Landscape Design for the adjacent Solar Farm (Landscape and Visual Impact Assessment Solar Farm, Hill Farm Duns Tew, Oxfordshire 19<sup>th</sup> June 2015) The 2015 report was used as the starting point for this current assessment.

# **BASELINE STUDY: LANDSCAPE ASSESSMENT**

# FOUR

#### 4.1 Landscape Baseline

- 4.1.1 All landscapes have character. It is what makes them unique and defines their sense of place. Natural England defines landscape character as;
- 4.1.2 'A distinct, recognisable and consistent pattern of elements, be it natural (soil, landform) and/ or human (for example settlement and development) in the landscape that makes one landscape different from another, rather than better or worse'
- 4.1.3 The Countryside Agency guidelines identify three main levels of Landscape Character Assessment:
  - National and regional scale;
  - County, district and unitary authority scale; and
  - Local, parish and site scale.
- 4.1.4 This section highlights the baseline landscape conditions that could be affected during and after the proposed development takes place.

#### 4.2 Landscape Character Appraisal

#### 4.2.1 National Landscape Character

- 4.2.2 In 2005, The Countryside Agency and English Nature (now 'Natural England'), with support from English Heritage, produced a map highlighting 159 national character areas (NCAs). This map combines English Nature's Natural Areas and the Countryside Agency's Countryside Character Areas into a composite map of Joint Character Areas, this was revised in 2012. The map and supporting descriptions provide the top tier of the hierarchy of Landscape Character Assessment in England and a national context for regional and local landscape and ecological assessments. The site and study area have been identified as being within 'Character 107 'Cotswolds'.
- 4.2.3 The document highlights the key characteristics of the Cotswolds as;
  - Defined by its underlying geology: a dramatic limestone scarp rising above adjacent lowlands with steep combes, and outliers illustrating the slow erosion of escarpments. The limestone geology has formed the scarp and dip slope of the landscape, which in turn has influenced drainage, soils, vegetation, land use and settlement.
  - Open and expansive scarp and high wold dipping gently to the southeast, dissected by river valleys.
  - Arable farming dominates the high wold and dip slope while permanent pasture prevails on the steep slopes of the scarp and river valleys with pockets of internationally important limestone grassland.

- Drystone walls define the pattern of fields of the high wold and dip slope. On the deeper soils and river valleys, hedgerows form the main field boundaries.
- Ancient beech hangers line stretches of the upper slopes of the scarp, while oak/ash woodlands are characteristic of the river valleys. Regular blocks of coniferous and mixed plantations are scattered across the open high wold and dip slope.
- Rich history from Neolithic barrows, iron-age hill forts and Roman roads and villas to deserted medieval villages, grand country houses, cloth mills and Second World War airfields. The field patterns largely reflect both the medieval open field system, with fossilised areas of ridge and furrow, and later planned enclosures.
- Locally quarried limestone brings a harmony to the built environment of scattered villages and drystone walls, giving the area a strong sense of unity for which the Cotswolds are renowned. Bath stone is also famous and has been used for building since Roman times, both locally in the principal buildings and streets of Bath.

## 4.2.4 <u>Regional Landscape Character</u>

- 4.2.5 A Regional Character Assessment was carried out in 1995. This is not entirely relevant today as it has been superseded by the Oxfordshire Wildlife and Landscape Study (OWLS) however the recommendations of the 1995 Landscape Assessment were taken forward into the OWLS assessment, so the key characteristics have been listed here. The **Cherwell District Landscape Assessment** places the majority the study area and the site in the 'Ironstone Hills and Valleys' Landscape Character Area.
- 4.2.6 The key characteristics for the character area are as follows and are very typical of the landscape observed on the site visit.
  - This is an Upland Area which forms part of the northern extent of the Cotswold Hills indeed, the Costwolds AONB extends over part of this character area at Epwell. The main distinguishing features are its extremely complex topography and the style of vernacular buildings which is unique to the Banbury region. The unspoilt ironstone villages and tranquil countryside are remote and isolated, particularly towards the west of the character area.
- 4.2.7 The Cherwell Valley landscape character area also taken from the 1995 study and comes within 1km of the site to the east, it primarily follows the valley of the river Cherwell. The key characteristics for this character area as follows:
  - South of Banbury, the River Cherwell flows southwards through its well defined valley. A second waterway, the Oxford Canal, and the mainline Oxford-Birmingham railway run parallel to the river. Rolling valley sides with open fields enclose tranquil watermeadows. Settlements are served by roads running along the higher ground, the villages sitting just below the brow of the valley sides facing one and another.

- 4.2.8 The **Oxfordshire Wildlife and Landscape Study** (OWLS) was completed in 2004. This builds upon the Regional Character Assessment noted in 4.2.5. Refer to drawing ALD848/LD1006 for an extract of the Landscape Character Assessment part of the study. This study places the main fields of the solar farm in the Clay Vales Landscape Type
- 4.2.9 Other Landscape types that feature within the study area are Farmland Plateau, River Meadowlands, Vale Farmland, Wooded Estatelands, Wooded Pasture Valleys and Slopes, Pasture Hills and Wooded Estate Slopes and Valley Sides. For the point of the assessment we are only describing those that cover site.
- 4.2.10 The key characteristics from the Clay Vales Landscape Type is as follows:

This is a low-lying vale landscape associated with small pasture fields, many watercourses and hedgerow trees and well defined nucleated villages. A flat, low-lying landform.

- Mixed land uses, dominated by pastureland, with small to medium-sized hedged fields.
- Many mature oak, ash and willow hedgerow trees.
- Dense, tree-lined streams and ditches dominated by pollarded willows and poplars.
- Small to medium-sized nucleated villages.
- 4.2.11 Part of the study area (south to west) falls within the **West Oxfordshire Landscape Assessment** at its closest point it is 1km from the site. This area is covered by the Landscape Character Ironstone Valleys and Ridges. The key landscape and visual character is described as:
  - Like the Northern Valleys and Ridges, the character of this area is defined by its overall diversity, with the complex landform and the intricate patchwork of fields, hedges and woodland combining to create a rich pattern of landscape. The ironstone geology and well-treed character are particularly distinctive and unifying elements in the landscape. Within the area, a number of different local landscape types have been identified.

#### 4.2.12 Local Landscape Character

4.2.13 There is no local landscape character assessment covering the site.

#### 4.3 Natural Characteristics

4.3.1 In order to understand the landscape and visual impacts a development might have, the existing character of an area and its natural features must be taken into account. Appreciating that landscapes have a different character ensures that future developments are well situated and adhere to relevant environmental, social and economic objectives.

## 4.4 Topography

#### 4.4.1 <u>Site Topography</u>

4.4.2 The left-hand field slopes gently from a southwest to northeast direction towards the stream at approximately 89m AOD to 86m AOD. The right-hand field slopes with a slightly greater incline from a south to north direction towards the stream at approximately 92m AOD to 86m AOD. The access track

follows the local topography so varies in height from approx. 100m AOD at the Oxford Road to 88m AOD at the eastern edge of the solar farm

## 4.4.3 <u>Study Area Topography</u>

- 4.4.4 Within the study area the land is very undulating, following the many streams and valleys. Typically, the lowest point within the study area (less than 80m) is in the east following the river Cherwell and the Oxford Canal. From this point in an east to west direction along a stream corridor, the land forms a natural valley at approx. 80-100m AOD.
- 4.4.5 The land rises away from this valley in the north and the south to high points of approx. 160m AOD within the study area and approximately 1-1.5km from main field through the villages of Deddington and Duns Tew. Refer to drawing ALD848/LD1005 for a map of the topography.

## 4.5 Geology and Soil

- 4.5.1 The soils of the site are described as being 'slowly permeable seasonally wet, slightly acid but base-rich loamy clayey soils' the soils in the study are made up of predominately those as described for site and the following:
  - Loamy freely draining, slightly acid but base-rich soils, pastures and deciduous woodlands;
  - Loamy free draining, lime-rich soils, herb-rich, chalk and limestone pastured, lime rich deciduous woodlands.

#### 4.6 Vegetation

#### 4.6.1 <u>Site Vegetation</u>

- 4.6.2 Both portions of the fields that are proposed to be covered by solar panels are currently a mixture of arable out of the flood plain (southern aspect) and grass within the flood plain (northern aspect). The boundary to the north and northeast is this buffer of pastoral land associated with the local stream and its related vegetation (this is well treed), to the southeast and south there is no formal boundary just the remainder of the 2 large fields and a redundant hedgerow, to the west the existing solar farm and its 2m high deer fencing form the boundary.
- 4.6.3 The access track that will be used for the build of the solar farm connects the Oxford Road (A4260) to the east of the site, this track follows the existing well used farm tracks, there is open arable fields to the south and hedgerows / trees to the north. See drawing ALD848/LD1011.

#### 4.6.4 <u>Study Area Vegetation</u>

4.6.5 The village of Duns Tew is surrounded immediately on all sides by pastoral and arable fields. Further away from Duns Tew numerous Villages are found - Deddington (northeast), North Aston (east), Middle Aston (southeast), Middle Barton (southwest), Hempton and Barford St Michael (northwest). In-between these villages the surrounding landscape is predominately arable farmland and some pastoral grassland, local lanes contained by clipped / overgrown hedgerows on either side, with the numerous mature hedgerow trees, small copses and woodlands. The village of Duns Tew itself is well vegetated with mature vegetation consistent with other settlements in the study area.

4.6.6 There are several brooks and rivers within the study area. These are well vegetated, with taller hedgerows / woodlands that have in places become over grown. Refer to drawing ALD848/LD1004 for a map of the significant vegetation in the area.

## 4.7 Water Bodies

- 4.7.1 The site is gently sloping down to the adjacent stream on its northern boundary. This is a gentle, meandering, slow flowing stream that are no more than 1-2 foot deep in times of average rainfall. The stream plays a significant part in draining the central quadrant of the study area and flows east into the River Cherwell at the eastern most point of the study area. This stream collects water from drainage ditches and other streams along its route.
- 4.7.2 The River Cherwell and the Oxford Canal follow roughly the same route and clip the edge of the study area in the east at the 3km distance. Other smaller streams drain the valleys to the north and south away from site. A number of small ponds can be found in the study area. Refer to drawing ALD848/LD1004 for a map of the significant waterbodies in the area.

## 4.8 Drainage

- 4.8.1 Site Drainage
- 4.8.2 The site slopes down to the northern boundary where the stream can be found. The lower areas of site are assumed to be floodplain for the stream.

## 4.8.3 Study Area Drainage

4.8.4 The study area is crisscrossed with numerous drainage ditches and streams, looking at the contours they appear to drain towards the River Cherwell.

#### 4.9 Cultural and Social Factors

#### 4.9.1 Settlement and Dominant Built Form

- 4.9.2 The site is found within the parish of Duns Tew, Oxfordshire. Duns Tew is a mainly linear village running east to west. The site is located in the north eastern portion of the parish outside of the settlement boundary.
- 4.9.3 The site is situated at Hill Farm to the north of Duns Tew. To the east of the development site, is a recently planted area of young woodland that is healthy and thriving. To the south the site abuts the pastoral / arable fields also in the ownership of Hill Farm. To the south beyond the Hill Farm the village of Duns Tew can be found. In the west beyond the immediate boundary with the adjacent solar farm is a small mature woodland copse. To the north a small stream forms the northern boundary of the site, beyond this there are numerous arable and pastoral fields and Plumdon Lane Bridleway.
- 4.9.4 The closest houses are found at Hill Farm to the south, Lower Farm to the southwest and Tomwell Farm to the north. Beyond this Duns Tew is the closest village in the south, Hempton to the northwest and Deddington to the northeast.

- 4.9.5 The villages in the area are characterised by their strong linear form, often having developed outwards from crossroads along approach roads, they are situated in amongst the arable field patterns. Some village edges have a well wooded character, with hedgerows and mature trees concealing buildings and restricting views, while others, have more open edges affording longer distance views.
- 4.9.6 Historic Development
- 4.9.7 Extracted from the Duns Tew Conservation Area Appraisal.
- 4.9.8 From the evidence that is left us in the form of crop marks, it would seem that human activity within the vicinity of Duns Tew began in prehistoric times. There is no evidence of a Roman settlement within the village, although a number of Romano-British finds have been made within the locality. These finds are more probably connected to Ilbury Camp, a site not far to the north of the village. The earliest evidence of an Anglo-Saxon settlement come in the form of a ninth century animal broach found within the village.
- 4.9.9 The name 'Dun' is believed to have been derived from the Anglo-Saxon personal name 'Dunn', presumably a landowner and 'Tew' has tentatively been interpreted to mean 'ridge'. The name 'Duns Tew' first appears in documents of the thirteenth century. Duns Tew stands on the northern edge of the limestone belt. This high and exposed position was made habitable by an abundance of water from springs and wells.
- 4.9.10 Houses were built in the Middle Ages east and west of the church on both sides of the road passing through the village and north along Hill Farm Lane (formerly Cow Lane), but there was little building to the south.
- 4.9.11 The medieval fields of Duns Tew, as recorded from the early fourteenth century, seem clearly to have been centred on the present village. There were until the enclosures in 1794 two separate sets of fields east and west of the village. Known as Down End field and West End field respectively, each was divided into north side and south side to give a two-field rotation.
- 4.9.12 Within the village there are six farmhouses, Malthouse and Glebe Farms in the east and Daisy Hill, Manor House, Manor and Spring Farms in the west.
- 4.9.13 Hill Farm (site) sits outside of the settlement boundary is the earliest of the outlying farms created by the enclosure of around 100 acres of the north side of Down End field. A farmhouse was probably built between 1688 and 1720. It is possible that this is the building incorporated into the farm buildings to the east of the present farmhouse which was designed around 1865 by William Wilkinson. Other outlying farms were built after the enclosures of 1794.
- 4.9.14 There is an indications of a small deserted settlement some 400m south-east of Hill Farm, beside the stream where the medieval mill stood.

4.9.15 At the time of carrying out the desktop study, and assessment process, no historical references are evident for Plumdon Lane. However, it was noted on reviewing several historical OS maps that Plumdon Lane existed, and has existed, over a number of centuries and is considered to be an historic bridleway (reference the location of viewpoints 8, 11 and 13).

## 4.9.16 Industry

- 4.9.17 Farming is still the main industry in Duns Tew, but due to mechanisation, agriculture employs a fraction of the people it would have done in years gone by. The majority of the buildings within the village are residential. The only non-residential premises within the village are The White Horse pub, the church and the village hall. At the western edge of the village is located a small industrial area which houses a number of small enterprises.
- 4.9.18 Agricultural farming practices have shaped the local landscape for many years, creating a patchwork field pattern interspersed with settlements and farmland structures, synonymous with the British countryside. The majority of employment is now found outside the village in places such as Deddington, Banbury and possibly even Oxford.

## 4.10 Aesthetic and Perceptual Aspects

4.10.1 The aesthetic qualities of the local area are summarised in the table below and have been divided into the main categories identified by the Countryside Agency and Scottish Natural Heritage guidance (CA and SNH, 2002).

Table 9: Ae	sthetic Factors
Enclosure	The development site is enclosed by existing vegetated boundaries (north and northeast) the rest of the site is open onto the remainder of the fields, with the exception of the west that is bounded by the existing solar farm. The access track is lined with hedgerows to one side. Public access is limited. The mature well vegetated field boundaries within the vicinity of site, act to contain the space.
	These boundaries combined with the undulating nature of the surrounding landscape of neighbouring fields, creates a sense of localised enclosure when within them in the valley bottom.
	The balance of the surrounding landscape character is weighted towards agricultural practices which dominate the area.
Balance	Numerous settlements are scattered throughout the farmed landscape of the wider area with transport routes further dissecting the patchwork field arrangement. Significant long distance views are very limited to the highest ridges with many views being restricted due to the undulating topography and the presence of tall field boundaries.
	Breaks in these boundaries allow for mid-distance views, whilst simultaneously screening the area in the immediate foreground.

Table 9: Aes	sthetic Factors
	The landscape holds a generally informal yet organised pattern, due to agricultural practice, that creates a mosaic of fields all separated by vegetated boundaries.
Pattern	The locality experiences limited transport infrastructure with B roads acting as the main link between built settlements, and the occasional A road further afield.
	Public footpaths and trails scatter the local area, meandering through farms, grassland and local woodland.
Diversity	The local topography, assortment of different sized arable / improved grassland fields and the mixture of small single farmsteads and larger villages, combine to create a relatively diverse landscape that, aesthetically, meets with the general character of the area.
	Vegetation diversity is enhanced by the native mature field boundaries and associated woodland edge ground flora that weave through the landscape.
Scale	Field boundaries break up the expanse of agricultural land to create smaller scale farms which form the local landscape. The sense of scale within the main field is restricted by the undulating topography mixed with mature field boundaries, woodland copses and the villages. Expansive rural views are experienced from the ridgelines towards the north and south of the study area.
Form and	The horizontal elements include open agricultural landscape, grassland, roads and footpaths, which contrast with the vertical mass of buildings, large farm sheds and pylons that are located in the area and vertical communication masts on the horizon.
Line	Mature field boundaries and woodland copses composed of various native/naturalized tree and shrub species, provide much of the vertical element to the area and create an intermediate transition between the built form and the surrounding landscape.
Colour	Natural greens, browns and yellows of the rural countryside, dominate the background landscape, with glimpses of browns, reds, blacks and greys coming from the villages and scattered built form.
	Due to the nature of the surrounding landscape these colours continue to change throughout the seasons.
Movement	Animation is brought to the calm landscape through the localised areas of urban development that have infrastructural links such as roads, amenities, schools, churches and recreational areas.
	Seasonal and weekend peaks in activity would see greater movement, with visitors using local trails and footpaths. Dominant agricultural practices add to the informal and relaxed feel of the landscape in the background.

## 4.11 Transport Links

#### 4.11.1 The Site Transport Links

As the site is part of land belonging to Hill Farm currently both vehicle and pedestrian access is gained to the site from the south via the access track from Duns Tew off Hill Farm Road.

#### 4.11.2 Study Area Transport Links

A strong network of minor and occasional major roads exists within the study area, with the A4260 running closest to site in the east at a 0.4km distance in a north south direction. The mainline railway between Oxford and Birmingham runs through the study area in the east at the 3km distance, this follows the same direction and location as the Oxford Canal. Refer to drawing ALD848/LD1001

#### 4.12 Landscape Dynamics

4.12.1 The landscape is continually changing and evolving, mainly in response to the demands placed upon it, but sometimes due to the lack of management. An examination of the likely changes to the landscape as a whole is important in setting the context of potential changes caused by the proposed development. It may also identify opportunities the proposed development may create for positively improving the landscape, whilst also preventing change considered to create a negative impact.

#### 4.13 Classification and Evaluation

4.13.1 The above appraisal concludes that the classification of the existing landscape as part of the Landscape Character Area is an accurate reflection of the character of the site.

Table 10:	
Landscape Elements	Description
Quality	The proposed development site does not fall within any landscape designation, but is in keeping with its use as farmland / settlements and shows signs of management in the quality of its mature species, particularly along the established field boundaries (north and northeast). The development site is dominated by monoculture vegetation maintaining a sub-optimal level of biodiversity.
	Compared to the surrounding landscape which, due to agricultural farming, is highly managed, the development site has a moderately lower level of quality. The landscape quality for the proposed development site is rated as <b>moderate</b> .
Value	The landscape has been assigned <b>minor</b> landscape value rating, at its importance is only relevant on a local level, with some redeeming features and possibly room for improvement.
Condition	The landscape has been assigned a <b>moderate condition</b> rating with a coherent pattern of elements and strong ecological and functional integrity.
Capacity	The rating of <b>moderate</b> for landscape capacity has been applied, as the character area can accommodate a degree of change without significant effect on its character.

4.13.2 The table below illustrates how these criteria have been appraised to achieve an assessment of the area's sensitivity.

Compatibility	The development site does not fall within any land designation and views in and out of the site are restricted to be within 1km. Presence of existing built form (settlements and farmsteads) some at higher elevations (breaking the skyline) adjacent to the site is of significant mass to make these proposals <b>compatible</b> with the existing environment, although localised visual changes may be significantly different to those currently experienced, the impact of additional screening will be of benefit.
Scope for Mitigation	The proposed development gives numerous opportunities for a landscape and ecological enhancement strategy to be implemented. Proposals could include replacement planting of any native vegetation lost through development.
Overall landscap	be sensitivity of the site = <b>Moderate to Low</b>

# **BASELINE STUDY: VISUAL ASSESSMENT**

## FIVE

#### 5.1 Visual Baseline

#### 5.1.1 Introduction

- 5.1.2 In order to assist with viewpoint selection, as well as to appreciate the potential influence of the development in the wider landscape and to indicate areas where views into the site might be possible, a desk study of the area's topography, mature vegetation, settlements, recreational facilities and footpaths was undertaken.
- 5.1.3 The information obtained from this provided a selection of viewpoints that offered long distance, middle distance and glimpsed views of the site. This selection of potential viewpoints, were then visited and assessed for their overall potential sensitivity to the potential PV Solar Farm development, during and after construction. Other viewpoints identified as important were added during the field work.
- 5.1.4 This section briefly describes issues specifically relevant to visual matters both within the site and in the context of the general study area. Specific reference should also be made to the Photographic Viewpoints for Assessment (drawings ALD848/LD1015 LD1024), contained within the Appendices.
- 5.1.5 This section represents the findings of the Applied Landscape Design visit in January 2019 and the desk study. It was highly apparent when out in the fields undertaking the site survey that in particular the landform and landcover significantly altered and in occasional cases blocked views to the site that were thought to be evident within the desk study assessment.
- 5.1.6 However an even spread of views was established throughout the study area at varying distances to and from the proposed site on the day. They were restricted though by the topography to within 1.5-2km of the site. It was felt that when undertaking the site visit the natural ridgelines that formed in the land to the north and southwest meant that the land actually fell away from the proposed site at some 1.5-2km in these areas. Refer to drawing ALD848/LD1005
- 5.1.7 Landscape topography and vegetation played a big part in the restriction of views, especially from the east, south and west with woodland tracts, the river valley and tall hedgerows providing interrupted intermittent views that were short and enclosed in nature.
- 5.1.8 During the site visit the villages of Adderbury, Barford St John, Ledwell, Middle Barton, and North Aston were all visited on foot from the local Public Rights of Ways or on roads. We were unable to see the site from these points, nevertheless that doesn't rule out the possibility that they might be seen from upper storeys within buildings. However, this does not form part of this assessment.

## 5.2 Viewpoints

5.2.1 These viewpoints offer views that may be particularly sensitive to change. These could be associated with areas used regularly by the public, such as footpaths, roads and recreational areas or might be a single house, edge of village that has clear views of the proposed area. The viewpoints also represent areas which may be perceived to be sensitive to the visual impact of the proposed development but which in reality have restricted views of the site.

#### 5.2.2 <u>Viewpoint 1</u> – also in the 2015 assessment.

- 5.2.3 This viewpoint is located on Hill Farm Lane, to the Northern edge of Duns Tew looking northwest approximately 1km from the main field area of the potential development site. It is adjacent to Hill Farm entrance and has glimpsed views of the main fields with hedgerows, hedgerow trees and vegetation along a localised valley in the foreground fragmenting the overall view. Upper portions of the infrastructure of the adjacent existing solar farm can be seen. The land between the view and main field is gently undulating giving an expansive feel to the landscape at this point. Farmsteads, individual houses, and fencing to adjacent deer enclosures all add to the arable scene.
- 5.2.4 This viewpoint's sensitivity has been rated as **moderate**.
- 5.2.5 <u>Viewpoint 2</u> also in the 2015 assessment.
- 5.2.6 This viewpoint, looking northwest, is located on the Aston Road at the junction with the Oxford Road (A4260). It is approximately 1.3km from the main field area of the potential development site. The adjacent existing solar farm can be seen beyond Hill Farm nestled in the valley bottom. The A4260 is a relatively frequently used country road between Duns Tew and North Aston / Deddington. This location offers views towards the site through a busy arable scene of hedgerows, hedgerow trees and farm buildings, they would divert the eye from any potential development. The scale of the view combined with elements of existing built settlement present, make it only a small element within the scene, but still visible.
- 5.2.7 This viewpoint's sensitivity has been rated as **moderate**.
- 5.2.8 <u>Viewpoint 3</u> also in the 2015 assessment.
- 5.2.9 This viewpoint is taken from a field gate on the Oxford Road (A4260). When stationary, the view looks west towards the site (noting however that cars at 40 to 60mph are the main users passing this receptor). The viewpoint is at a distance of approximately 0.5km the main field area of the potential development site. When stationary, this location offers direct and unobstructed views of the development site through a busy arable scene of hedgerows, hedgerow trees and farm buildings. The adjacent existing solar farm can be seen clearly in the background as can previous mitigation planting. Given the nature of the viewpoint, the elements in the arable scene divert the eye from any potential development particularly when considered in the context that the majority of people will be passing / glimpsing this from a vehicle.
- 5.2.10 This viewpoint's sensitivity has been rated as **low.**

- 5.2.11 <u>Viewpoint 4</u> also in the 2015 assessment.
- 5.2.12 This viewpoint is taken from Deddington Cemetery, off the Hempton Road (B403) at approximately 1.5km from the closest point to site looking in a southerly direction. This location offers direct views towards the farm and Hill Farm Lane access track. This is a busy arable scene of hedgerows, hedgerow trees and farm buildings, which will continue to divert the eye from any potential development. There are far reaching views of Duns Tew on the horizon. Due to the localised topography, the main fields are not visible from this location as they sit within the valley bottom and the PV Solar Panels are low in height, but other taller elements of the development might be visible, hence it was included as a view.
- 5.2.13 This viewpoint's sensitivity has been rated as moderate.
- 5.2.14 <u>Viewpoint 5</u> also in the 2015 assessment.
- 5.2.15 This viewpoint is taken from a Public Right of Way (Bridleway) on Mackley Hill, heading towards Tomwell Farm. It is approximately 1km from the main field area of the potential development site. The view looks in a south to south-easterly direction. This is an expansive view across the valley towards the other side, providing far reaching views of Duns Tew and a communication mast. Due to the localised topography, the arable lower levels of the main fields are not visible from this location as they sit within the valley bottom and the PV Solar Panels are low in height but other taller elements of the development might be visible along with the PV solar panels that are closer to Hill Farm on the higher slope.
- 5.2.16 This viewpoint's sensitivity has been rated as moderate.
- 5.2.17 <u>Viewpoint 6</u> also in the 2015 assessment.
- 5.2.18 This viewpoint no longer exists in 2019, so has been removed.
- 5.2.19 Viewpoint 7 also in the 2015 assessment.
- 5.2.20 This viewpoint no longer exists in 2019, so has been removed.
- 5.2.21 Viewpoint 8
- 5.2.22 This viewpoint is taken from Plumdon Lane Bridleway, adjacent to Tomwell Farm. The view looks in a southerly direction towards the development site, and is 0.75km away at its closest point. This is a wide simple view across arable fields, woodland and the stream valley towards Duns Tew. The buildings of Duns Tew and the communication mast can be seen breaking the skyline and the back of the existing solar farm is in the mid view down in the valley showing up as a dark colour against the arable fields. Hill Farms access track is visible from this point as it comes out of Duns Tew and travels towards Hill Farm, then the existing maintenance track for the existing solar farm comes out of Hill Farm towards the main field as a strip of colour between two ploughed fields. There is a direct and unobstructed view of the majority of the development site, with hedgerows and hedgerow trees in the foreground breaking the view.
- 5.2.23 This viewpoint's sensitivity has been rated as high.

- 5.2.24 <u>Viewpoint 9</u> also in the 2015 assessment.
- 5.2.25 This viewpoint has been removed in the 2019 assessment as better viewpoints were selected see viewpoints 11 and 13.
- 5.2.26 <u>Viewpoint 10</u> new viewpoint.
- 5.2.27 This viewpoint is taken from a field gate / gap in the hedgerow on a local Footpath that connects Hill Lane, Duns Tew and the Oxford Road (A4260). The viewpoint is at a distance of approximately 0.2km the eastern edge of the development site. This location offers direct and unobstructed views of the development site through to a busy arable scene of hedgerows, hedgerow trees and farm buildings beyond. The adjacent existing solar farm can be seen clearly in the background. Given the nature of the viewpoint and the distance from site the proposed solar farm will dominate the view.
- 5.2.28 This viewpoint's sensitivity has been rated as high.

#### 5.2.29 <u>Viewpoint 11</u> – new viewpoint.

- 5.2.30 This viewpoint is taken from Plumdon Lane Bridleway, approximately 0.5km east of Tomwell Farm. The view looks in a southerly direction towards site, and is 0.5km away at its closest point. This simple view is wide and open, it looks across arable fields, woodland and the stream valley towards Duns Tew. The back of the existing solar farm can be seen in the right of the view. The buildings of Duns Tew and the communication mast can be seen breaking the skyline. The existing farm track is visible from this point as it comes out of Duns Tew and travels towards Hill Farm, then the existing maintenance track for the existing solar farm comes out of Hill Farm towards the main field as a strip of colour between two ploughed fields There is a direct and unobstructed view of the main fields (both ploughed and arable) with stream vegetation and hedgerow trees in the foreground occasionally breaking the lower portion of the view.
- 5.2.31 This viewpoint's sensitivity has been rated as high.

#### 5.2.32 <u>Viewpoint 12</u> – new viewpoint.

- 5.2.33 This viewpoint is taken from the Hempton to Duns Tew Road through a gap in the hedgerow. The view looks east to southeast towards the site at a distance of approximately 1.4km at its closest point to the PV solar farm. Although only a local road, it is frequently used as it connects Duns Tew to Hempton. The slightly elevated position this view affords means the main fields (ploughed and arable) of the development site are partially visible. This location offers views towards the site through a busy arable scene of hedgerows, hedgerow trees and farm buildings, they would divert the eye from any potential development. The scale of the view combined with elements of existing built settlement present, make it only a small element within the scene, but none the less still visible.
- 5.2.34 This viewpoint's sensitivity has been rated as moderate
- 5.2.35 <u>Viewpoint 13</u> new viewpoint.
- 5.2.36 This viewpoint is taken from Plumdon Lane Bridleway, approximately 1km east of Tomwell Farm. The view looks in a southerly direction towards site, and is 0.5km away at its closest point. This view is more enclosed than viewpoint 11 due to the mature trees along Plumdon Lane and the slight raise in the topography in the foreground before it dips away towards the stream. It still looks across arable fields, woodland and the stream valley towards Duns Tew. The buildings of Duns Tew can be seen

breaking the skyline. The existing farm track is visible from this point as it comes out of Duns Tew and travels towards Hill Farm, then the existing maintenance track for the existing solar farm comes out of Hill Farm towards the main field as a strip of colour between two ploughed fields. The arable lower levels of the main fields are not visible from this location as they sit within the valley bottom and the PV Solar Panels are low in height but other taller elements of the development might be visible along with the PV solar panels that are closer to Hill Farm on the higher slope.

- 5.2.37 This viewpoint's sensitivity has been rated as **high**.
- 5.2.38 The table below summarises the sensitivity of the viewpoints

Table 11 – Viewpoints Summary					
Viewpoint	Location	Distance from Site	Potential Designations / Receptors	Sensitivity	
Viewpoint 1	Hill Farm Lane, Duns Tew, looking northwest.	Approx. 1km	Local residents of Duns Tew, Conservation Area, Listed Buildings	Moderate	
Viewpoint 2	Field by North Aston Road and Oxford Road (A4260) junction looking north to northwest.	Approx. 1.3km	Bus users, drivers of the A4260 and North Aston Road, Listed Building.	Moderate	
Viewpoint 3	Area beside Oxford Road (A4260) looking west.	Approx. 0.5km	Drivers of the A4260 and users of the local PROW network.	Low (due to vehicular association)	
Viewpoint 4	Deddington Cemetery, off Hempton Road (B403), looking south.	Approx. 1.5km	Visitors to the Cemetery, drivers of the B4031. Also adjacent to Conservation Area, Listed Buildings and residents of Deddington.	Moderate	
Viewpoint 5	Deddington Circular Walk at Mackley Hill, heading towards Tomwell Farm, Deddington, looking east to southeast.	Approx. 1km	Users of the local PROW network and Deddington Circular Walk. Residents at Tomwell Farm.	Moderate	
Viewpoint 8	Looking south from Plumdon Lane, adjacent to Tomwell Farm.	Approx. 0.75km	Residents of Tomwell Farm. Users of the local PROW network	High	
Viewpoint 10	Footpath to valley bottom, to the east of Hill Farm, looking west through a gateway	Approx. 0.2km	Users of the local PROW network	High	

Table 11 – Viewpoints Summary					
Viewpoint	Location	Distance from Site	Potential Designations / Receptors	Sensitivity	
Viewpoint 11	Looking south from Plumdon Lane, directly north of Duns Tew	Approx. 0.5km	Users of the local PROW network	High	
Viewpoint 12	On the Hempton to Duns Tew road looking east	Approx. 1.4km	Users of the local PROW network	High	
Viewpoint 13	Looking south from Plumdon Lane, directly north of Duns Tew, and East of Viewpoint 11	Approx. 0.5km	Users of the local PROW network	High	

# **ASSESSMENT OF EFFECTS**

#### 6.1 Key Development Characteristics

- 6.1.1 Current proposals are for a PV Solar Farm, covering an area of 12.82 hectares and its associated access track. The proposed development will involve the construction and operation of an array of solar panels with a total installed capacity of 8.92MW. The renewable electricity generated will be distributed back into the Local Distribution Network. This will involve:
  - 26,236 photovoltaic panels;
  - 2 inverter/transformer units (6.1m in length, 2.6m in height and 2.4m wide);
  - 2 inverter/transformer units (12.2m in length, 2.6m in height and 2.4m wide);
  - 1 spares container unit (6.1m in length, 2.6m in height and 2.4m wide);
  - 1 customer substation unit (4.58m in length, 2.40m in height and 2.5m wide) will house equipment required to convert the direct current PV output into usable AC power
  - Pole mounted Infra-red CCTV cameras located within the perimeter fence to be mounted on galvanised steel poles 3m above ground level at a maximum of 65m apart;
  - Approximately 1900m of perimeter security fencing; and
  - An informal 3m wide 450m long access track for the purpose of building the solar farm only.
- 6.1.2 Around the perimeter of the main field there will be a 5m minimum standoff distance from the boundary to ensure protection of the existing field boundary hedgerow and to ensure sufficient space is left for maintenance purposes once operational. For security purposes, a perimeter fence will be installed at the 5m standoff distance and will be constructed of standard deer fencing to minimise visual impact. The fence will be 2m tall and will be supported by wooden fence posts located at 4m intervals. Secure 2m tall steel mesh gates will be installed at the points where access is gained from the main field.
- 6.1.3 Access to the site will be gained from an existing farm access track from the A4260 Oxford Road which will be improved, and visibility splays added following the Construction Traffic Management Plan. Materials will be off loaded into a temporary compound and transported to site on trailers.
- 6.1.4 There will be no external artificial lighting installed as part of the proposed development.
- 6.1.5 To connect the solar panels with the grid, the wiring will be secured above ground to the back of the supporting frames. Shallow trenches will be dug to a maximum depth of 800mm to accommodate wiring for the connection between the arrays to the inverters / transformers and the customer sub-station, which in turn will be connected to the existing DNO substation
- 6.1.6 The planting scheme which is outside the red line boundary, is an additional benefit of the proposal, but is not necessary to make the planning proposal acceptable. To confirm no planting is offered within the planning application boundary.

6.1.7 The proposed solar farm has a 40 year asset life, after this point the site will be cleared and reverted back to agricultural land in full.

## 6.2 Introduction to Construction Phase Effects

- 6.2.1 The main landscape impact associated with the construction would include:
  - Loss of arable areas;
  - Loss of pastoral areas;
  - Loss of a small length of redundant hedgerow and its hedgerow trees;
  - Adverse but temporary landscape impacts due to the introduction a temporary access road (part using existing tracks part using arable land)
  - Nominal and temporary adverse landscape impacts on aesthetic and perceptual attributes of the surrounding landscape character areas, through increased vehicular traffic for the duration of the build / decommission;
  - Nominal and temporary adverse landscape impacts on tranquillity through increased vehicular traffic and construction on site for the duration of the build / decommission;
  - Nominal adverse impacts on the accessibility of the surrounding landscape;

## 6.3 Introduction to Construction Phase Visual Effects

- 6.3.1 The main visual impact associated with the construction would include:
  - Adverse visual impacts on a few viewpoints due to the visibility of elements associated with construction, including construction machinery and construction materials.
  - Adverse visual impacts from increased construction traffic to and from the development including construction vehicles and commuters;
  - Adverse impact from viewpoints in close proximity to the application site due to the presence of lighting associated with construction;
  - Adverse visual impact due to the introduction of solar panels and accompany infrastructure (CCTV, fences, transformers) and subsequent loss of farmland landscape elements.

#### 6.4 Introduction to Operational Phase Effects

- 6.4.1 The main landscape impact associated with the development would be a loss of existing green fields, combined with the inclusion of additional built form (solar panels, accompanying infrastructure):
  - Loss of arable areas;
  - Dual purpose activity with pastoral activities occurring concurrently with the solar panels;
  - Loss of features within the site boundary of an area perceived as a moderate to low quality landscape (redundant hedgerow and its hedgerow trees);
  - Landscape impacts on aesthetic and perceptual attributes of the surrounding landscape character areas;
  - Beneficial minor increase in diversity of vegetation to the main fields. Proposed grassland species should be selected to complement existing species found within the site and the local area, that will bring an even greater benefit to the site having regard to the existing ecology;

- Change in use associated with a solar farm on agricultural land;
- Increased human activity.

## 6.5 Introduction to Operational Phase Visual Effects

- 6.5.1 The main landscape impact associated with the development would be a loss of existing softscape features and increase in built form:
  - Adverse impact from viewpoints in close proximity to the application site due to the introduction of built form into a farm setting;
  - Adverse impact from viewpoints in close proximity to the main fields due to the introduction of 2m tall deer fencing;
  - Beneficial visual impacts due to their not being an increase in traffic to and from the development (vehicles that already service the existing solar farm will add this in to the same rotation);
  - Beneficial visual impacts by not using external artificial lighting within the development, will ensure that the night scene will not change, and the fields will remain in darkness.
  - Adverse / beneficial visual impacts on a few Viewpoints, due to the visibility of new soft landscape design externally to the site boundary in particular the northern boundary;
  - Beneficial visual impacts on several viewpoints due to land externally to the site boundary and viewpoints being utilised to help deflect and screen views over time by planting screening vegetation.

## **MITIGATION OF EFFECTS**

## SEVEN

#### 7.1 Introduction to Mitigation

- 7.1.1 Landscape and visual issues within the study area have been considered during the development's evolution to help give priority towards the landscape and visual mitigation. This will ensure that a comprehensive and integrated approach is taken to the landscape proposals.
- 7.1.2 This section develops the outline landscape and visual mitigation strategy for the site. It aims to mitigate any landscape and visual impacts of the development which were identified in the previous section during the construction and operational phases.
- 7.1.3 The mitigation measures have been grouped as inherent and additional landscape and visual mitigation measures. Inherent landscape and visual mitigation measures are included in the strategy/design for the site and have been developed during the LVIA process.
- 7.1.4 Additional measures in this instance are related to the landscape around the site that is external to the planning application boundary but immediately adjacent to it. These measures are classed as an additional benefit of the proposal but not necessary to make the planning proposals acceptable.

#### 7.2 Introduction to the Mitigation of Construction Phase Effects

- 7.2.1 Construction phase effect mitigation: landscape
  - Retention of more valuable landscape features within or on the ownership boundary line. Note: It is not envisaged that any loss would be significant;
  - Fencing off existing landscape features to be retained. Where applicable, Trees in Relation to Construction BS 5837:2012 should be applied to protect root areas;
  - Where possible, use of fall cut-off lighting to reduce stray upward light and minimise light pollution;
  - Provision of 5m stand-offs in order to safeguard mature perimeter vegetation.
- 7.2.2 Construction phase effect mitigation: Visual
  - Where possible, use of fall cut-off lighting to reduce stray upward light and minimise light pollution;
  - Provision of 5m stand-offs in order to safeguard perimeter vegetation;
  - Where possible provide screen planting off-site to protect views from sensitive landscapes (feasibility of this measure to be confirmed).

## 7.3 Introduction to the Mitigation of Operational Phase Effects

- 7.3.1 Operational phase effect mitigation: landscape inherent mitigation measures:
  - Replacement of any perimeter vegetation lost through construction or operational activity to ensure the integrity of the vegetated site boundary. The planting palette should utilise 'like for like' species;
  - Additional mitigation measures: Use of permeable surface materials for compound and access tracks the interests of sustainable urban drainage.

#### 7.4 Operational Phase Effect Mitigation: Visual

- 7.4.1 Inherent mitigation measures:
  - Replacement of any perimeter vegetation lost through construction or operational activity to ensure the visual screening provided by the vegetation is maintained and where possible enhanced;
  - Use of locally sourced shrubs / trees to complement existing species found on site benefit existing ecology/
- 7.4.2 Additional mitigation measures:
  - Tree planting to land within farmland land owned by the client to soften the appearance of the solar farm and strengthen the stream boundary, however land immediately adjacent to the main fields in the east, south and west cannot be planted with anything taller than a hedgerow as this would compromise solar gain (overshadowing);
  - Beneficial visual impacts on several viewpoints due to land between the site and viewpoints being utilised to help deflect and screen views over time by either planting screening vegetation or allowing hedgerows to grow taller than they currently do.

# **CUMULATIVE AND ADDITIVE EFFECTS**

# EIGHT

#### 8.1 Cumulative Landscape Effects

- 8.1.1 The assessment of potential landscape impacts is primarily focused upon the proposed solar farm development, placed within its landscape context. The assessment does also take into consideration how this proposal will be viewed alongside the existing 2015 solar farm at Hill Farm, Duns Tew and be perceived as an extension due to the two sites being side by side.
- 8.1.2 The general conclusion is that, in a localised context, landscape impacts will arise however when considered in an increasingly broad context especially more than 2km distance from the site, these impacts are of moderate or minor significance. The extent within which this transition to minor / not significant would occur, is considered to be beyond the 2km distance from the application site due to topography and landcover.
- 8.1.3 The character of the wider landscape would largely be unaffected by the addition of the proposed solar farm, supporting infrastructure and landscaped areas, due to the fact that there is already a solar farm established here in the lower valley and as noted above this would just be seen as an extension. Beyond 2km from the site its visibility decreases significantly of the existing solar farm and the assumptions made about the proposed one.
- 8.1.4 In a localised context, landscape character changes will be significant as there are several direct and unobstructed views within 1km and the proposal is easily doubling the area covered by solar panels in this small valley, so there will be a dominance of manmade lines and colours instead of the more natural farm environment.

#### 8.2 Cumulative Visual Effects

- 8.2.1 The assessment of potential visual impacts is, primarily, focused upon the proposed development, placed within its landscape context alongside the existing 2015 solar farm at Hill Farm. The general conclusion is that, in a highly localised context within 1km of the proposed site, potential visual impacts would arise, however when seen in an increasingly broad context, these impacts are of moderate / minor or not significant. The extent within which this transition to not significant would occur is also considered to be within 2km of the application site.
- 8.2.2 The local landscape already accommodates significant built form in the shape of settlements, some of which sit on top of rises in the topography (and therefore break the skyline), the landscape also accommodates the existing 2015 solar farm, in many southerly views at a quick glance this looks blue and water like. From the north it's a blacker colour, akin to the recently ploughed fields.

8.2.3 Localised (within 1km) visual changes will be different to those currently experienced especially from the north and the east were views are widest and greatest and there is more mass of manmade shapes and colours. But as there is already a solar farm established here in the lower valley this would just be seen as an extension, these shapes and colours of the proposed development now exist they would not be new.

## 8.3 The Broader Context

8.3.1 Any impacts relating to the development site is deemed not to be significantly adverse in the broader context of the landscape. Though agricultural land remains the dominant landscape type in the area, the existing built form in the shape of villages and farmstead and their associated buildings and infrastructure comprises a substantial component in the broader context visually. Meaning the area has already been subject to development / urbanisation especially in relation to the installation of the existing 2015 solar farm.

## 8.4 Residual Effects: Introduction to Residual Effects

- 8.4.1 The potential landscape and visual effects of the proposed development on the surroundings, and in particular the views from Viewpoints have been assessed through desktop studies and the site visit.
- 8.4.2 <u>Residual Landscape Effects: Description of Residual Landscape Effects During Construction and</u> <u>Operational Phase</u>
  - Having assessed the landscape baseline of the development site (12.82ha) and identified the
    potential elements of the development likely to cause change to that baseline, a detailed
    assessment of the possible changes can be made.
  - The construction of the development proposals would result in the removal of existing arable and pastoral land. In the short term this would be replaced by construction activities for the erection of the proposed solar farm, security fencing and temporary access track. Following the construction of the proposed solar farm, the development would account for the progressive implementation of a landscape strategy outside the planning application boundary. This would include replacement planting, using a palette associated with a rural landscape with additional external vegetation screening the extremities of the development on the boundaries.
  - Construction would not require any re-profiling of the internal and surrounding landscape, so effects on topography would not be significant and levels would be maintained in their current condition. The overall impact of construction on the landscape would be low, and the external environment outside the planning application boundary should also experience aesthetic enhancements through increased, colour, texture and form through the proposed soft landscape on completion.

#### 8.4.3 Changes in Social and Cultural Factors

- The principal alteration to cultural and social factors would concern the commencement of construction activities within a predominately arable landscape.
- Upon completion the development will introduce additional built form into the area by the way of a solar farm. There will not be an increase in vehicular traffic in the form of maintenance vehicles as vehicles that already service the existing solar farm will add the proposed one into the same rotation. It is unlikely to increase recreational visitor numbers as there will be nothing on offer to local residents. Cultural or social impacts are likely to be similar to those currently experienced by the existing surrounding settlements.

 A strategic planting strategy for outside the planning application boundary, incorporating locally found native species would provide a buffer between the development and rural landscape beyond, whilst simultaneously improving the overall diversity of the area by enhancing the age structure of the surrounding landscape.

## 8.4.4 Changes in Aesthetics and Perceptual Aspects

- The recurrent visual strength of the existing built environment from the villages, pylons, communications masts, large farm barns and existing solar farm would render any effects from the proposed development as moderate to low, assuming the development is implemented, using appropriate building materials where feasible and implements the tree planting and screening recommendations.
- The proposed solar farm will add to the overall physical mass of the built environment in particular as its adjacent to the existing solar farm, solar panels, transformers and security fencing will replace a soft arable landscape with solid angular materials.
- The proposed soft landscape outside the planning application boundary will add further visual interest, colour, texture and form, to a predominantly low level and monoculture landscape with young tree planting adding vertical structure and connecting with the existing boundaries within which the development site sits.

## 8.5 Residual Magnitude of Landscape Impacts Summary

- The predicted residual magnitude of landscape impacts of the development is localised in scale and restricted to the site and immediate environs up to 1.5km. This assessment is mainly due to the undulating nature of the topography and land cover of the surrounding area, plus the presence of existing built settlements within the local environment.
- The localised nature of the landscape impacts mean that the proposed development would result in low adverse impacts on the wider landscape at a regional level. Landscape mitigation outside the planning application boundary would enhance the scenic quality of the area providing age structure, colour and texture to a previously monoculture agricultural field.
- There will be no topographic/drainage alterations therefore the site would not impact on the landscape quality of the area and would largely blend within the existing landform.
- It is therefore concluded that the overall magnitude of the landscape impacts would be low and with the potential for providing enhancements once the proposed development is complete and the landscape re-vegetation strategy is implemented.

#### 8.6 Residual Visual Effects

8.6.1 Using the viewpoints identified in the visual baseline an assessment can be made of the potential magnitude of the visual change likely to be incurred through the proposed development.

#### 8.6.2 <u>Magnitude of Visual Impact</u>

- For each of the viewpoints the potential magnitude of the residual visual impacts, taking into account each phase of the development and proposed mitigation, has been assessed. The magnitude of visual impacts is mainly dependent upon the following factors:
- What proportion of the existing view that would change as a result of the development proposals?
- How many features or elements within the view would be changed?
- How appropriate is the proposed development in the context of the existing views?
- How many viewers would be affected by the changes in the view?
- What is the timescale of the proposed development? Also, is it continuous or intermittent?
- What is the angle of the view in relation to the main activity of the receptor?
- The magnitude of change is categorised as high, medium, low or negligible.

#### 8.6.3 Magnitude of Residual Visual Change for Viewpoints

• The magnitude of change for each viewpoint was assessed for both construction and on completion.

#### 8.7 Viewpoints

- 8.7.1 The location of the Viewpoints, and a photograph of each from the site visit in January 2019, together with a description, are included within the Appendices towards the end of the document.
- 8.7.2 <u>Viewpoint 1</u> Hill Farm Lane, Duns Tew, looking northwest.

#### 8.7.3 Construction

Due to the topography of the viewpoint in relation to the development site, it may be possible to see an increased level of activity onsite for the duration of the construction of the solar farm, this will be restricted to the taller elements on site.

 Due to the local topography combined with the existing screening vegetation and existing buildings the overall impact would be **moderate** and temporary in nature.

#### 8.7.4 On Completion

Any view of the solar farm on completion would be low due to the localised topography and distance, Hill Farm blocks a large amount of the view to the site. It is likely that there are only glimpse views and high level views from neighbouring properties.

At the 15 year point it will not affect the overall quality of this viewpoint.

• The magnitude of visual impact of the proposed development is assessed to be **moderate** during construction, **low** upon completion, and **low** at Year 15.

8.7.7 <u>Viewpoint 2</u> – Field by North Aston Road and Oxford Road (A4260) junction looking north to northwest.

## 8.7.8 <u>Construction</u>

Due to the elevated position of the viewpoint, the topography and landcover between the view and the development site, it would be possible to see an increased level of activity onsite at points during the construction of the solar farm.

• The local topography combined with the existing screening vegetation and distance beyond the site boundary means the overall impact would be **low** (even during the winter months) and temporary in nature.

#### 8.7.9 On Completion

Any view of the solar farm would be low due to the existing screening vegetation, localised topography and the scale of the view. Combined with elements of existing built settlement the solar farm is only a small element within the scene. It will not affect the overall quality of this viewpoint.

At the 15 year point it will not affect the overall quality of this viewpoint.

- The magnitude of visual impact of the proposed development is assessed to be **low** during construction, **low** upon completion, and **low** at Year 15.
- 8.7.10 <u>Viewpoint 3</u> Area beside Oxford Road (A4260) looking west.

#### 8.7.11 Construction

The very flat local topography between the viewpoint and the development site, with a busy arable scene of hedgerows, hedgerow trees and farm buildings, means it will be possible to see an increased level of activity onsite through the construction of the solar farm as currently a large portion of the site is visible. The construction impact would be moderate and temporary in nature.

 Due to the local topography combined with the existing screening vegetation and existing farm buildings / solar farm the overall impact would be **moderate** (even during the winter months) and temporary in nature.

#### 8.7.12 On Completion

Any view of the solar farm on completion would be moderate due to the screening vegetation, localised topography distance from the site. Initially before the external mitigating vegetation has time to grow the panels and associated infrastructure would be visible from this point. But once the vegetation has established and the existing foreground vegetation has grown visibility of the site will be significantly reduced to glimpses, at the 15 year point it will not affect the overall quality of this viewpoint.

 The magnitude of visual impact of the proposed development is assessed to be moderate during construction, moderate upon completion, and low at Year 15. 8.7.13 <u>Viewpoint 4</u> - Deddington Cemetery, off Hempton Road (B403), looking south.

#### 8.7.14 Construction

The undulating local topography between the viewpoint and the development site, with an arable scene of low clipped hedgerows and farm buildings, means it would be possible to see an increased level of activity for the site but this will likely be restricted to the taller elements as the majority of the fields receiving the solar farm are in the valley bottom and hidden from the view. Meaning impact would be low and temporary in nature.

 Due to the local topography combined with the existing screening vegetation and existing buildings the overall impact would be **low** (even during the winter months) and temporary in nature.

#### 8.7.15 On Completion

The screening vegetation and the fact that the main fields to receive solar panels are in the valley bottom means the site would largely be concealed from this viewpoint.

- The magnitude of visual impact of the proposed development is assessed to be **low** during construction, **negligible** upon completion, and **negligible** at Year 15.
- 8.7.16 <u>Viewpoint 5</u> Deddington Circular Walk at Mackley Hill, heading towards Tomwell Farm, Deddington, looking east to southeast.

#### 8.7.17 Construction

Due to the topography of the viewpoint in relation to the development site, it would be possible to see an increased level of activity onsite in the southern half of the development site receiving the solar farm, the northern half of the site is in the valley bottom so visibility across to the tops of the construction machinery may be possible. Meaning impact would be moderate and temporary in nature.

 Due to the local topography combined with the existing screening vegetation, existing solar farm and existing buildings the overall impact would be **moderate** and temporary in nature.

## 8.7.18 On Completion

Any view of the solar farm on completion would be low due to the screening vegetation, localised topography distance from the site. It would be possible to see an element of the solar panels in the southern half of the development site; the northern half of the development site is in the valley bottom this means the site would largely be concealed from this viewpoint.

• The magnitude of visual impact of the proposed development is assessed to be **moderate** during construction, **low** upon completion, and **low** at Year 15.

8.7.19 <u>Viewpoint 8</u> - Looking south from Plumdon Lane, adjacent to Tomwell Farm.

#### 8.7.20 Construction

Due to the topography of the viewpoint and elevated position in relation to the development site, it would be possible to see an increased level of activity onsite for the duration of the construction of the solar farm.

 Due to the local topography combined with the existing screening vegetation, existing solar farm and existing buildings the overall impact would be **moderate** and temporary in nature

#### 8.7.21 On Completion

Any view of the solar farm on completion would be moderate from this view in part due to the localised topography and distance from the development site. At both completion and year 15 the panels and associated infrastructure would be visible. Once the vegetation outside of the site boundary has established and a suitable maintenance scheme put in place visibility of the development site will be slightly reduced. However, this will not affect the magnitude of change as a large proportion of the solar field will be visible thanks to the angle and elevation of the view.

- The magnitude of visual impact of the proposed development is assessed to be **moderate** during construction, **moderate** upon completion, and **moderate** at Year 15.
- 8.7.22 <u>Viewpoint 10</u> Footpath to valley bottom, to the east of Hill Farm, looking west through a gateway

#### 8.7.23 Construction

Due to the close proximity to the viewpoint and angle of view upwards to the sky in relation to the development site, it would be possible to see an increased level of activity onsite for the duration of the construction of the solar farm, and this will be dominant above anything else.

Due to the local topography and distance from the view the overall impact would be **moderate**.

#### 8.7.24 On Completion

Any view of the solar farm on completion would be moderate from this view in part due to the localised topography and distance from the development site. At both completion and year 15 the panels and associated infrastructure would be visible (south eastern most portion). The mitigation vegetation proposed for the scheme external to the planning application boundary will help to screen the site from this viewpoint and it will soften the edges. This however will not affect the magnitude of change as a good proportion of the solar field will be visible thanks to the distance from the site.

• The magnitude of visual impact of the proposed development is assessed to be **moderate** during construction, **moderate** upon completion, and **moderate** at Year 15.

8.7.25 <u>Viewpoint 11</u> - Looking south from Plumdon Lane, directly north of Duns Tew

#### 8.7.26 Construction

Due to the topography of the viewpoint and elevated position in relation to the development site, it would be possible to see an increased level of activity onsite for the duration of the construction of the solar farm.

 Due to the local topography combined with the existing screening vegetation, existing solar farm and existing buildings the overall impact would be **moderate** and temporary in nature

#### 8.7.27 On Completion

Any view of the solar farm on completion would be moderate from this view in part due to the localised topography and distance from the development site. At both completion and year 15 the panels and associated infrastructure would be visible. Once the vegetation outside of the site boundary has established and a suitable maintenance scheme put in place visibility of the development site will be slightly reduced in the foreground along the stream. However, this will not affect the magnitude of change as a large proportion of the solar field will be visible thanks to the angle and elevation of the view.

 The magnitude of visual impact of the proposed development is assessed to be moderate during construction, moderate upon completion, and moderate at Year 15.

#### 8.7.28 <u>Viewpoint 12</u> - On the Hempton to Duns Tew road looking east

#### 8.7.29 Construction

Due to the topography of the viewpoint and elevated position in relation to the development site, it would be possible to see an increased level of activity onsite for the duration of the construction of the solar farm.

 Due to the local topography combined with the existing foreground screening vegetation and existing buildings the overall impact would be **moderate** and temporary in nature

#### 8.7.30 On Completion

Any view of the solar farm on completion would be low from this view in part due to the distance from the development site and its static nature. At both completion and year 15 a portion of the panels and associated infrastructure would be visible. The mitigation vegetation proposed external to the site boundary for the scheme will not screen the site from this viewpoint, it will go some way to softening the edges of the site.

 The magnitude of visual impact of the proposed development is assessed to be moderate during construction, low upon completion, and low at Year 15.

- 8.7.31 Viewpoint 13 Looking south from Plumdon Lane, directly north of Duns Tew, and East of Viewpoint 11
- 8.7.32 Construction

Due to the topography of the viewpoint in relation to the development site, it would be possible to see an increased level of activity onsite in the southern half of the development site receiving the solar farm, the northern half of the site is in the valley bottom so visibility across to the tops of the construction machinery may be possible. Meaning impact would be moderate and temporary in nature.

 Due to the local topography combined with the existing screening vegetation, existing solar farm and existing buildings the overall impact would be **moderate** and temporary in nature.

#### 8.7.33 On Completion

Any view of the solar farm on completion would be low due to the foreground screening vegetation, localised topography distance from the site. It would be possible to see an element of the solar panels in the southern half of the development site; the northern half of the development site is in the valley bottom this means the site would largely be concealed from this viewpoint.

- The magnitude of visual impact of the proposed development is assessed to be moderate during construction, low upon completion, and low at Year 15.
- 8.7.34 Table 12 summarises the cumulative and additive effects written within this chapter and formalise the potential significance of the landscape and visual impacts.
- 8.7.35 It must be noted that the proposed solar farm has a 40 year asset life, after this point the site will be cleared and reverted back to agricultural land in full. Therefore when the table below mentions 'Permanent Change of Character and Use' this is considered for the lifespan of the development (40 years) not for an indefinite period of time, there is a time limit. It is classed as permanent due to the fact that 40 years is a reasonable length of time in a person's outlook especially in the current world, where people can be very transient.

Table 12 – Summary of Effects						
Receptor	Sensitivity	Phase	Magnitude of Change	Type of Impact	Significance	
		Construction	Moderate	Temporary	Moderate	
Viewpoint 1	Moderate	Completion	Low	Permanent change of character and use (40yrs)	Moderate / Minor	
		Year 15	Low	Beneficial and permanent (40yrs)	Moderate / Minor	
Viewpoint 2	Moderate	Construction	Low	Temporary	Moderate / Minor	
		Completion	Low	Beneficial and permanent (40yrs)	Moderate / Minor	
		Year 15	Low	Beneficial and permanent (40yrs)	Moderate / Minor	

Table 12 – Summa	Table 12 – Summary of Effects					
Receptor	Sensitivity	Phase	Magnitude of Change	Type of Impact	Significance	
		Construction	Moderate	Temporary	Moderate / Minor	
Viewpoint 3	Low	Completion	Moderate	Permanent change of character and use (40yrs)	Moderate / Minor	
		Year 15	Low	Beneficial and permanent (40yrs)	Minor	
					Madarata (	
		Construction	Low	Temporary	Minor	
Viewpoint 4	Moderate	Completion	Negligible	N/A	Not Significant	
		Year 15	Negligible	N/A	Not Significant	
		Construction	Moderate	Temporary	Moderate	
			Moderate		Madarata (	
Viewpoint 5	Moderate	Completion	Low	and use (40yrs)	Minor	
		Year 15	Low	Permanent change of character and use (40yrs)	Moderate / Minor	
					Mainer	
		Construction	Moderate	Temporary	Major / Moderate	
Viewpoint 8	High	Completion	Moderate	Adverse and permanent (40yrs)	Major / Moderate	
		Year 15	Moderate	Permanent change of character and use (40yrs)	Major / Moderate	
		Construction	Moderate	Temporary	Major / Moderate	
Viewpoint 10	High	Completion	Moderate	Adverse and permanent (40yrs)	Major / Moderate	
		Year 15	Moderate	Permanent change of character and use (40yrs)	Major / Moderate	
		Construction	Moderate	Temporary	Major / Moderate	
Viewpoint 11	High	Completion	Moderate	Adverse and permanent (40yrs)	Major / Moderate	
		Year 15	Moderate	Permanent change of character and use (40yrs)	Major / Moderate	

Table 12 – Summary of Effects						
Receptor	Sensitivity	Phase	Magnitude of Change	Type of Impact	Significance	
	High	Construction	Moderate	Temporary	Major / Moderate	
Viewpoint 12		Completion	Low	Beneficial and permanent (40yrs)	Moderate	
		Year 15	Low	Beneficial and permanent (40yrs)	Moderate	
Viewpoint 13	High	Construction	Moderate	Temporary	Major / Moderate	
		Completion	Low	Adverse and permanent (40yrs)	Moderate	
		Year 15	Low	Permanent change of character and use (40yrs)	Moderate	

- 8.7.36 Viewpoints 8, 10 and 11 have come out as with the highest impact of Major / Moderate for the landscape and visual impacts across the construction, completion and 15 years post completion as per the Impact of Magnitude Matrix Sensitivity of Receptor (Table 7). The reason why these 3 viewpoints stands out as a higher impact above the other 7 viewpoints, is because they are the closest viewpoints to the site, specifically views 8 and 11 and take in the widest and direct length of view along the northern boundary of the development site, where the proposed solar farm is sited.
- 8.7.38 Table 8 categorises the two significance of impacts as the following:
  - Major Very large or large change in environmental or socio-economic conditions. Effects, both adverse and beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving national, regional or local objectives, or, could result in exceeding of statutory objectives and/or breaches of legislation.
  - **Moderate** Intermediate change in environmental or socio-economic conditions. Effects that are likely to be important considerations at a local level.
- 8.7.39 It should be noted that when reviewing table 8 and the descriptions of the Level of Significance, Major does not fit the profile of the effects and scheme.
- 8.7.40 This type of development is likely to swing to the Moderate Level of Significance. It would be considered Major if the development broke the skyline and was highly visible, but due to careful site selection the proposed solar farm sits in the valley bottom, and is only seen consistently within a 1.5km radius of the site. The area already incorporates an existing solar farm and the new solar farm will introduce additional straight lines into an organic farmland landscape. However as with the existing solar farm the proposed solar farm is low level, and it is intended that it will be screened by new vegetation external to this application at ground level by either existing vegetation or proposed vegetation, ensuring its boundaries are in character and keeping with the surrounding context.
- 8.7.41 Therefore it is not believed that it is a site that is worthy of consideration at a regional or district level, hence not in keeping with the Major category.

## **CONCLUSION / RECOMMENDATIONS**

## NINE

- 9.1 The proposed solar farm (see Appendix 1 for drawings) should not cause unacceptable landscape and visual impacts especially in the wider landscape, this is mainly due to the presence of the existing solar farm that was built in 2015. The study area and specifically the valley bottom to the north of Hill Farm / Duns Tew has already accommodated rather well this manmade element with its square lines and unnatural colours, therefore as the proposed development sits immediately on the eastern boundary to the existing solar farm it will be perceived to be an extension.
- 9.2 The proposed planting measures external to the planning application boundary will assist in the integration of the infrastructure into the surrounding landscape, but the development is by no means reliant on them. This planting will help lessen the impact on a couple of the short distance views from the east (Oxford Road (A4260) viewpoint 3 & PROW viewpoint 10) and north (Plumdon Lane viewpoints 8, 11 and 13), but careful sighting has also assisted in the integration. To confirm no planting is offered within the planning application boundary.
- 9.3 The most notable impact will be the physical change in landscape character of the proposed development site from open arable / pastoral fields to a solar farm. The temporary access track to allow site access during the build / decommissioning is considered to be in keeping with the surrounding area.
- 9.4 The impact upon the heritage assets within the area (Conservation Areas, Listed Buildings, and Scheduled Ancient Monuments) will be minimal as it is only isolated listed buildings such as Hill Farm and those in the settlement boundary of Duns Tew that will realistically see towards the development site and the proposed changes. The access road, will not compromise the integrity of the views as it's intended to be like for like.
- 9.5 Several opportunities exist to reduce the visual impact of the proposed development and improve and conserve the character of the area in line with the recommendations made within the landscape character assessment. They are as laid out below and some already form part of this application.
- 9.6 The proposed layout of the development will comprise of 26,236 photovoltaic panels; 4 inverter/transformer/substation units, a spares container unit, a substation unit, pole mounted Infra-red CCTV cameras, approximately 1900m of perimeter security fencing; and a 3m wide 450m long access track and is contrasting to the rural, natural landscape character. The duration of the proposed solar farm is 40 years, after this point the site will be dismantled and returned back to agriculture.
- 9.7 Using for the duration of the build the farmers existing access track from the Oxford Road (A4260) to the development site is a positive point, ensuring limited works will be undertaken along its length and limited change in character will be undertaken. The change in character will be contained to the main solar fields only which is at the lowest point in the valley.

- 9.8 The use of deer fencing as the perimeter fence (2m tall supported by wooden fence posts located at 4m intervals) is a practical option, and this type of fencing is already used to contain the existing solar farm (see drawing ALD848/LD1013) it was also noted when standing at viewpoint 1 there is deer fencing in use within the fields close to Duns Tew where deer are being reared. Ensuring it is in keeping with the area and in a natural unobtrusive material as possible.
- 9.9 Land adjacent to the site cannot be densely planted to deflect views and screen the site as this would compromise the solar gain (overshadowing) and this in not offered with this planning application. However, land outside the planning application boundary but on the land owners land is being offered as an additional benefit to this scheme. As noted in point 9.2 this will assist with the integration of the solar farm and will help to deflect and screen views over time, but is not reliant on them. This planning will be screening vegetation. It was noted that at viewpoint 3 in the east, matrix planting has already recently been undertaken in fields adjacent to the Oxford Road (A4260) and along the course of the stream. This would help to deflect views over time refer to drawing ALD848/PL401 Landscape and Ecology Recommendations
- 9.10 It is recommended that all the proposed shrubs / trees planted as part of the wider site improvements should be selected to complement existing species found within the site and the local area, with specific shrubs / trees that will bring an even greater benefit to the site having regard to the existing ecology. Evergreen plants will comprise an element of the native / naturalised planting mix.
- 9.11 Not using external artificial lighting within the development, will ensure that the night scene will not change, and the fields will remain in darkness.
- 9.12 It is therefore considered that any landscape or visual impacts will be highly localised to the development site or to the adjacent fields around site to a distance of approximately 1-1.5km as the study suggests and this will be for the 40 year duration only. Any affects beyond this extent will be moderate / minor during construction decreasing to low and negligible on completion and at year 15 post completion.

# APPENDICES

Drawing Name:	Drawing Reference:
Duns Tew Energy Park Location Plan (IPV Flexgen)	PV-0446-02
Site Layout Plan (IPV Flexgen)	PV-0446-02
Site Location Plan	ALD848 / LD1000
Transport (Rivers and Major Transport Routes)	ALD848 / LD1001
PROW's (Public Rights of Way)	ALD848 / LD1002
Wider Site Context (Surrounding Site Context)	ALD848 / LD1003
Landuse (Surrounding Landuse and Land Cover)	ALD848 / LD1004
Ridges and Valleys	ALD848 / LD1005
Landscape Character Assessment	ALD848 / LD1006
Zone of Theoretical Visibility – Bare Earth	ALD848 / LD1007
Zone of Theoretical Visibility – Urban / Woodland / Screening Analysis	ALD848 / LD1008
Zone of Theoretical Visibility – Mitigation Analysis	ALD848 / LD1009
Zone of Theoretical Visibility – Urban / Woodland / Screening Analysis / Cumulative	ALD848 / LD1010
Site Context	ALD848 / LD1011
Main Field Photos	ALD848 / LD1012
Adjacent Site Photos	ALD848 / LD1013
Viewpoint Locations	ALD848 / LD1014
Photographic Viewpoints Sheet 1 to 10 (January 2019)	ALD848 / LD1015 to LD1024
Photomontage Proposed Viewpoint Sheet 1 to 8 (January 2019)	ALD848 / LD1025 to LD1032
Outside of Redline Boundary Planting Scheme	ALD848 / PL401