4 VISUAL BASELINE

4.1 INTRODUCTION

4.1.1 This section describes the views available to and from the Site, their distribution, character and sensitivity to change. Crestwood has conducted an assessment of the views available to and from the Site by the public by walking and driving (as appropriate) local roads and rights of way.

4.1.2 An examination of the ZTV of the Proposed Development and verification in the field enabled six potential viewpoints to be identified within the study area (see **Figure 2**). The likely extent of visibility of the Proposed Development from the wider landscape can only be determined from the on-site assessment. Predicted visibility of the Proposed Development is normally greater in winter (when trees and hedgerows have no leaves). Due to the project programme, the assessment was carried out in summer when trees and hedgerows were in full leaf. However, based on extensive past experience, all potential viewpoints were considered in light of the potential for winter visibility.

4.2 VIEWPOINTS

4.2.1 The locations of a representative range of locations where views could be potentially influenced by the Proposed Development are illustrated on **Figure 2**. Viewpoints have been selected to best represent the variety of views available from public vantage points towards the Proposed Development.

4.2.2 A zone of 'primary visibility', indicating the approximate area from where it is predicted that the Proposed Development would be clearly noticeable to the casual observer, taking into account hedgerow and tree cover in winter, as well as interlying buildings, is illustrated on **Figure 2.** The selected views are contained at **Viewpoints 1 to 6** (Figures 3 – 8) and described in **Table 3.**

Table 3 Representative Viewpoints (RVPs)

RVP No.	Location	Grid Ref.	Distance / direction to the Site	Reason for selection.
1	View Southeastwards from Horsemoor Drove	538952, 319013	56m E / SE	From local minor road passing adjacent to the Site
2	View Northwards from Village Hall, Sutton St James	539473, 318364	200m NNW	Representative of views from dwellings on the northern edge of Sutton St James
3	View Westwards from Jarvis's Gate	539881, 318966	355m W	Close to dwellings along local minor road (also a promoted circular walk)
4	View Southwards from Public Bridleway, adjacent to the South Holland Main Drain	539174, 319603	438m S	Public Bridleway
5	View West-southwestwards from Public Bridleway, adjacent to the South Holland Main Drain	538175, 318992	833m E / SE	Public Bridleway
6	View Southwards from Cockbourne Fen Dike, adjacent to Clark's Hill Farm	539129, 320061	890m S	Close to dwelling north of the Site

4.2.3 The key characteristics of the Site's baseline visual relationship with its surroundings can be described as follows.

4.2.4 **Viewpoint 1** illustrates the view from the Horsemoor Drove, a local minor road leading past the Site. There are expansive views across the flat Site towards Sutton St James near the horizon, which appears generally well filtered and screened by boundary vegetation. Due to the flatness of the landform, there is little depth of view available of the Site itself. The view includes electricity pylons and a distant wind farm, with the pylons prominent, vertical features in the view punctuating the skyline. Views from Horsemoor House are generally restricted by vegetation that leads southwards from the dwelling. 1 – 4 Horsemoor Drove would only achieve very oblique front or rear views, primarily from first floor windows, with potential for gable end views from no. 4 where there is a single small first floor window. Views from gardens would be partly restricted by coniferous vegetation.

4.2.5 **Viewpoint 2** is located near to the Sutton St James Village Hall at a field access point on the edge of a car park. It is representative of specific private views that may be achieved from properties on the northern edge of the village – particularly those to the west of the village hall. There are no interlying features to the Site with only the occasional shrub or tree along ditch lines. There are views across the site of the horizon line to the north and due to the flatness of the landform there is very limited depth of view of the Site.

4.2.6 **Viewpoint 3** is located adjacent to 51, Jarvis's Gate – east of the Site. It is representative of potential views for local road users (including using the promoted circular walk) and those obtained from the property. Views are relatively open with few interlying features. A small wind turbine is visible west of the Site with distant pylons noticeable vertical features in the distance. There are views across the Site to a treeline backdrop and due to the flatness of the landform there is very limited depth of view of the Site. Views from the dwelling are relatively open, punctuated by scattered bushes along drain lines.

4.2.7 **Viewpoints 4** and **5** are from the public bridleway along the South Holland Main Drain. **Viewpoint 4** offers views south across the Site of the northern edge of Sutton St James. This is from a specific vantage point where an interlying bund (levee) partially obscures views and in summer, views are further filtered by tall ruderal species and some scattered scrub. **Viewpoint 5** is from the bridleway to the west of the Site. For both views the skyline is punctuated by overhead electricity lines on wooden poles and lattice tower pylons, with the more distant wind farm to the distant southwest of the Site and a single turbine in the medium distance. The views illustrate that many properties around the northern edge of Sutton St James are relatively well-lined by vegetation on their boundaries. Due to the flat nature of the landform, there is very limited depth of view of the Site.

4.2.8 **Viewpoint 6** is near to the dwelling at Clark's Hill Farm, on Cockbourne Fen Dike (a local minor road). Views are afforded south across the Site towards Sutton St James with the skyline formed by the backdrop of the vegetation and buildings. The skyline is punctuated by large pylons crossing the landscape which are prominent man-made features. There is limited interlying vegetation, yet due to the flat nature of the landform, there is very limited depth of view of the Site.

4.3 VISUAL RECEPTOR FIELD ANALYSIS

4.3.1 The openness of the landscape provides opportunities of obtaining views of the Site,from a number of locations. Views from the south are limited to the northern edge of Sutton St James, with no notable views further south, given the interlying settlement. Views from the west are restricted by hedgerow and boundary vegetation around land at Horsemoor House and further restricted by isolated farm buildings. Views from the east extend to properties along Jarvis's gate, becoming increasingly restricted further east by interlying buildings. Given the flatness of the landscape whereby there are no elevated views across the Site, any interlying features such as any vegetation or buildings frequently fully or partially restrict visibility. Taking account of these field observations, a Zone of Primary Visibility (ZPV)is shown on **Figure 2**, showing that the most notable views of the proposals would be restricted to closer range locations.,

4.3.2 Horsemoor Drove (a local minor road) allows open views (see **Photoviewpoint 1**) of the Site from between east of Horsemoor House and Red House Bridge (over the South Holland Main Drain). Horsemoor House has two mature hedge/tree lines which extend southwards from the property, effectively screening/filtering views for any occupants and screening views from west of the Horsemoor House. Due to the orientation of properties 1 – 4 Horsemoor Drove (adjacent to Red House Bridge) only very oblique views are afforded or gable end views from property no. 4, filtered and screened via boundary coniferous vegetation.

4.3.3 There are views across the Site from the central northern edge of the Sutton St James (see **Photoviewpoint 2**). From roadside (Chapel Gate) views are restricted and filtered by boundary vegetation and interlying properties on the northern edge of Sutton St James. A number of dwellings (north side of Chapel Gate) potentially have rear views across the Site, which includes dwellings at Japonica Farm and no's. 88 – 114. The effects from these properties would be variable depending on the level of vegetation (in rear gardens) – with a number of dwellings appearing to have quite substantial screening and filtering features to the rear of the properties. It is noted that 4 of these properties (no's. 104 -110) were bungalow with the other properties being two storey.

4.3.4 Views from the western edge of Sutton St James are generally filtered by interlying vegetation and restricted by large agricultural buildings. Views form the eastern half of Sutton St James (east of the village hall) appear generally well screened and/or filtered by extensive mature treelines and hedgerow vegetation extending northwards from Sutton St James in the vicinity of St James Church and adjacent properties. Other properties further east in Sutton St James also appear to have more interlying boundary vegetation and features which would filter and/or screen views of all or some of the Site from ground level. Whilst visibility may be increased in winter it is predicted that due to the maturity of the planting uninterrupted views towards the Site would be infrequent.

4.3.5 Views of any consequence from outside the ZPV, south, southeast and southwest of Sutton St James are not achieved due to the interlying buildings at the village.

4.3.6 Views across the Site are available from the east from along Jarvis's Gate (see **Photoviewpoint 3**), restricted by interlying properties along the road, with the dwellings having potential for rear views across the Site where there is a lack of interlying features. Further east beyond Jarvis's Gate, views become increasingly restricted as interlying buildings screen views towards the Site.

4.3.7 From the north the most discernible publicly accessible views are those from the along the

bridleway which follows the line of the South Holland Main Drain (see **Photoviewpoint 4 and 5**). Beyond the South Holland Main Drain, there are few publicly accessible locations, save for local minor roads, and due to the increasing distance from the Site and the flat interlying landform (with some interlying screening and filtering features), any views of the Site are anticipated to become less prominent and therefore does not form part of the Zone of Primary Visibility. Views from isolated farmsteads/dwellings such as Clark's Hill Farm, would potentially be available from north of the Site, becoming less prominent as distances from the Site increase and intervening features, such as the levee along the South Holland Main Drain, restrict views (see **Photoviewpoint 6**).

4.3.8 Views from Red House (Listed Building) c. 760m are filtered by interlying vegetation with potential for first floor views partly restricted by interlying properties with potential views filtered through nearby planting, some of which is coniferous.

4.3.9 Beyond c.1km, views of the Site from the majority of public vantage points become increasingly filtered and restricted by interlying vegetation, built development and other landform features e.g. the South Drove drain. It is noted that most views of the Site beyond c.1km are oblique and transient for local road users.

4.3.10 In summary, as a result of field analysis, it is concluded there are only a limited number of localised publicly accessible receptors, where the Site (and the Proposed Development on it) would be clearly visible. Private views from scattered dwellings and some dwellings in Sutton St. James are frequently partially restricted (see ZPV on **Figure 2**).

5 DEVELOPMENT DESCRIPTION AND MITIGATION MEASURES

5.1 DEVELOPMENT DESCRIPTION

5.1.1 The solar PV arrays are to be constructed in rows following an east-west axis with access between individual rows and groups of arrays. The arrays are mounted on lightweight piles driven into the ground and do not require concrete. The PV modules are constructed as a double row, oriented to the south, facing the sun. Once constructed, the arrays would be at a maximum height of 3m above the ground. **Plate 2** below shows a recently installed Solar array near Ramsbury, Wiltshire.

Plate 2 Solar Farm, near Ramsbury, Wiltshire



5.2 MITIGATION MEASURES

5.2.1 In addition to the solar PV arrays, there would be a plant building (point of connection facility including metering point), occupying a footprint of approximately 30 sq. m and 2.6 m in height, in the south-west corner of the site. The building would be designed to have the appearance of a small shed to so that it does not appear incongruous with other built form in the area. It is likely that for security the site would be bordered by 2m high fencing. Details of the solar PV array design and layout are set out in the Design and Access Statement that accompanies the planning

application. The number of arrays along each row would vary according to the dimensions of the site.

5.2.2 There is limited opportunity to significantly change the design of the arrays as their appearance is functional. Given that the PV array faces towards the sun, consideration of reflectivity is important. The Design and Access Statement states that:

"The concept of efficient solar power is to absorb as much light as possible while reflecting as little light as possible. Standard solar module produces [sic] less glare and reflectance than standard window glass. Solar modules use "high transmission, low iron glass" which absorbs more light, producing smaller amounts of glare and reflectance than normal glass".

5.2.3 Common construction materials, such as steel and glass (as used in greenhouses or unpainted metal roofing) and many features of the natural environment such as water and grass have higher reflectivity than solar PV arrays. Technical glint and glare assessment for solar PV arrays are therefore widely accepted as being unnecessary. As illustrated in **Plate 2**, taken where the sun is striking the panels and leaving a shadow behind the frames, the low reflectivity of the panels and frames do not create any additional visual impact over and above views of the panels themselves, e.g. in overcast conditions.

5.2.4 The objectives of the mitigation are to reinforce the landscape features within the site such that they better relate with the wider character, and to reduce the potential for potentially adverse impacts on landscape character or visual amenity. The scheme encompasses a number of inherent mitigation measures to reduce potential landscape and visual impacts. The paragraph below describes how a planting scheme, proposed as part of the development as mitigation, could be implemented if conditioned as part of a consent.

5.2.5 The entire perimeter of the Site adjacent to the peripheral ditch network would be planted with a native hedgerow mix, totalling circa 2.2km in length, to provide visual screening of the proposals from ground level. Once established, the hedgerows should be brought into regular agricultural management and trimmed to a height of approximately 2-3m. A suggested species mix is listed below following review on site and with reference to the online Postcode Plants Database (Natural History Museum, n.d.) and local character assessment.

5.2.6 New hedgerow planting would consist of 45-60cm bare root whip plants at 300mm centres spacing as a double stagger hedge. The planting would either be protected by rabbit proof fencing or with individual shrub guards to protect the planting from browsing. Proposed hedgerow composition is set out below in **Table 4**.

Table 4 Proposed hedgerow mix

Percentage Mix	Latin Name	Common Name
50%	*Crataegus monogyna*	Hawthorn
10%	*Ligustrum vulgare*	Wild Privet
20%	*Prunus spinose*	Blackthorn
5%	*Rhamnus cathartica*	Buckthorn
5%	*Rosa canina*	Dog-rose
5%	*Sambucus nigra*	Elder
5%	*Viburnum opulus*	Guelder Rose

5.2.7 Any existing shrubs or trees would be incorporated in to the hedge line as appropriate. The proposed hedgerow mix would reinforce the linear peripheral ditch system, supplementing these existing wildlife corridors and encouraging further cross-interaction.

5.2.8 The existing crop would need to be taken off in order to facilitate the construction of the solar arrays. This would create the opportunity to restore a large area of grassland. The grassland should be managed through taking a hay cut or grazing. An appropriate seed mix would be agreed with the seed specialist and/or ecologist and local planning authority at the time of sowing.

5.2.9 The proposed scheme design, therefore, includes a range of landscape mitigation measures which would serve to reduce the level of potential landscape and visual effects. The section below sets out the assessment of landscape and visual effects at Year 1 (before the planting matures) and the residual effects which are predicted to arise as a result of the implementation of the Proposed Development following growth of the perimeter hedgerows. The assessment process combines objective methodology and elements of subjective professional judgement (See methodology at **Appendix 2**).

6 LANDSCAPE AND VISUAL ASSESSMENT

6.1 EFFECTS ON LANDSCAPE CHARACTERISTICS WITHIN THE SITE

6.1.1 The assessment process combines objective methodology and elements of subjective professional judgement (See methodology at **Appendix 2**).

6.1.2 The few notable landscape features within and bordering the Site comprise the peripheral drain network which delineate the fields (with a ditch running through the centre of the Site) and are not subject to any designation. Arable farming dominates the Site.

6.1.3 The Site itself is devoid of features worthy of retention, save for the drain lines. The proposed scheme includes for the retention of these drains, which would be relatively unaffected by development, with the periphery of the Site being reinforced with native hedgerow planting. The drain lines themselves are not highly susceptible to change from the Proposed Development and the geometric nature of the solar panels fits with the rectilinear nature of the fields delineated by the drains.

6.1.4 Given the relative lack of other important characteristic elements within the Site, overall it is considered that the Site characteristics have a Medium susceptibility to change from the proposed development. When combined with the Medium Landscape Value established as part of the baseline, this results in an overall Medium sensitivity.

6.1.5 The addition of the panels and associated infrastructure as new modern man made built features would have an adverse effect which is discussed in further detail below.

6.2 EFFECTS ON LANDSCAPE CHARACTER OF THE SITE

6.2.1 The baseline assessment of landscape character found that the site does not lie within any nationally or locally designated landscapes. The landscape character of the site is assessed as having a Medium susceptibility to change to the type of development proposed and when combined with the Medium Landscape Value established as part of the baseline, results in an overall Medium sensitivity.

6.2.2 The Proposed Development would result in a change to the nature of agricultural use from crops to semi-permanent grassland with solar panels. The introduction of solar arrays into the Site would change the predominant use on it; however the low-level structures and consistency of the arrays, whilst clearly modern man made features, would not alter the overall landscape framework of the Site, with the features contained within the exiting field pattern and peripheral drain network to be reinforced with new hedgerow planting.

6.2.3 It is considered that the Proposed Development would result in a Large magnitude of change as a result of the implementation of the scheme. Overall, this is considered to produce a Major/Moderate adverse effect on the landscape character of the site itself that is borderline Significant. It should be noted that this change is at a site level, more valued elements such as the drain network would be retained and the effects of the Proposed Development are fully reversible upon decommissioning. The effects of the Proposed Development on the locality are described below.

6.3 EFFECTS ON LANDSCAPE CHARACTER OF THE LOCALITY

6.3.1 The landscape character of the locality has been assessed as being of Medium sensitivity. As described above, the proposal is to implement a development of solar arrays within the area defined by the red line with appropriate standoffs any vegetation to be retained and the peripheral drain network, which would be unaffected by the proposals and the site perimeter reinforced with hedgerow planting.

6.3.2 The magnitude of change predicted from the surrounding area as a result of the implementation of the proposed scheme would typically range from Large to Medium at Year 1, within the Zone of Primary Visibility, to Small or Very Small from public locations further afield from the Site. Overall, it is considered that there would be up to a Major/Moderate adverse and borderline Significant effect on the landscape character of the local context from locations in close proximity to the Site at Year 1. The effects would diminish over time to a non- Significant level, as a result of the growth of new boundary hedgerow planting around the periphery of the Site.

6.3.3 There are no statutory (e.g. AONB) or non-statutory (e.g. Local landscape designation) designations within the 5km Study Area. Potential visibility from Cultural Heritage Assets and Listed Buildings is discussed in the baseline section and assessment covered in a separate report accompanying the application.

6.4 EFFECTS ON CLOSE TO MEDIUM RANGE VIEWS

6.4.1 As a consequence of intervening vegetation and the relatively flat landform, it was found that intervisibility between the site and publicly accessible areas was primarily restricted to close range views. This led to a number of the initial viewpoints being discounted, with Viewpoints 1 – 6 providing representative views from the local area. In order to avoid unnecessary reporting and focus on potentially significant effects, only the selected viewpoints and receptors that are located within or near the edge of the Zone of Primary Visibility are covered in detail. Predicted private views from dwellings are covered separately.

6.4.2 **Viewpoint 1** is from Horsemoor Drove. It is representative of views potentially obtained by local minor road users (Low Sensitivity). Due to the flatness of the landform, and the limited depth of view across the Site, the ground mounted Solar panels would form an immediately noticeable band of development running horizontally across the view. The majority of the development would be set against a treeline backdrop formed along the northern edge of Sutton St James. The tops of the panels at the closest point would be seen on a skyline already heavily punctuated by large pylons, infrastructure and wind turbines.

6.4.3 The magnitude of effect from the Proposed Development is considered to be Large due to the closeness and openness of the views, in Year 1 prior to the growth of new hedgerows. Views of the Proposed Development are not considered to have an adverse visual effect beyond a Moderate and not a significant level due to the Low sensitivity of the receptors. The effects would diminish with time and become increasingly filtered by new hedgerow planting along the boundary of the Site. The temporary construction traffic along this road is not considered a significant visual effect.

6.4.4 **Viewpoint 2** is from a field access point on the northern edge of Sutton St James, adjacent to the Village Hall. The view is more representative of visibility potentially obtained from dwellings

(which is dealt with below) and is not a key public location. The view would be obtained by the general public using the village hall car park and recycling point (Medium Sensitivity).

6.4.5 Views of the Site extendi to a skyline punctuated by pylons and intermittent vegetation. Views of the Proposed Development would be restricted to a narrow horizontal line of solar panels along the southern edge of the Site in Year 1. The magnitude of effect is considered to be Large and restricted to a Major/Moderate and borderline Significant level at Year 1, prior to the maturing of new hedgerows. The effects would diminish to a non-Significant level with time as the Proposed Development becomes filtered and screened by new hedgerow planting.

6.4.6 Views further south from public locations within Sutton St James (i.e. for pedestrian and road users of Chapel Gate), would have views further restricted by interlying buildings and filtered over the top of the hedgerow north of the village hall such that views are primarily transient and glimpsed. The route is a promoted local walk, so the sensitivity for local road users is considered to be Medium. The magnitude of change can be considered to be Medium and restricted to a Moderate and not significant level at Year 1, prior to the maturing of new hedgerows around the Site.

6.4.7 **Viewpoint 3** is from Jarvis's Gate, a local minor road and also part of the locally promoted circular walk (Medium sensitivity), east of the Site. Open views, where buildings are absent are available of the eastern boundary of the Site. The skyline is punctuated by bushes in the foreground and other vegetation and by infrastructure (wind turbine, pylons etc.) are located along the horizon. There is limited depth of view afforded form the viewpoint of the Site due to the flatness of the landform.

6.4.8 Views of the Proposed Development would be restricted to a narrow horizontal line of solar panels along the eastern edge of the Site in Year 1 . Users of the locally promoted walk are assessed to have a Medium sensitivity and the magnitude of effect is considered to be Large and of a Major/Moderate and borderline significant level at Year 1. . The effects would diminish to a non-Significant level within a few years as the Proposed Development becomes filtered and screened by the new hedgerow planting.

6.4.9 **Viewpoint 4 and 5** are from the bridleway along the South Holland Main Drain (also part of the locally promoted circular walk). The sensitivity of the local bridleway users with oblique views of the Site where the main focus is on the nearby South Holland Drain is considered to be Medium. From Viewpoint 4 the Proposed Development would form a narrow horizontal strip of development within the landscape, predominantly back-clothed by vegetation on the northern edge of Sutton St James. The Magnitude of effect is considered to be Medium at Year 1 and of a non-significant Moderate level, which would continue to diminish as the proposals become increasingly filtered and screened by new boundary hedgerows in the medium term.

6.4.10 **Viewpoint 5** is from a public bridleway with views across the flat agricultural landscape in the foreground extending to the horizon, with the skyline formed by vegetation on the northern edge of the Sutton St James and further afield to the distant southeast. The skyline is punctuated by overhead electricity lines on wooden poles and lattice tower pylons, with the more distant wind farm to the distant southwest of the Site. The Proposed Development would form a narrow horizontal strip of development within the landscape at the Site. Given the distance to the Site and the very narrow horizontal view of the edge of the Proposed Development the magnitude of the effect is considered to be Small and of a Moderate/Minor and not Significant level at Year 1. The