

Landscape and Visual Assessment

Chimmens Solar Farm, Mussenden Lane.

On behalf of RES Ltd.

Date: October 2023 | Pegasus Ref: P22-1221



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1. Introduction

- 1.1 This Landscape and Visual Assessment (LVA) has been prepared on behalf of RES Limited by Pegasus Group. It relates to the proposed Chimmens Solar Farm, which covers a number of agricultural fields located between Mussenden Lane and the M20 in Sevenoaks, Kent.
- 1.2 The site lies to the south of the village of Horton Kirby. Farningham lies to the west, with Hartley and New Ash Green to the east (as shown on a plan at **Appendix 2**).
- 1.3 The LVA considers possible effects of the proposed development upon landscape features, landscape character and visual amenity.
- 1.4 This assessment has been guided by the assessment criteria set out in **Appendix 1**. It should be noted that all of the landscape and visual effects stated within assessments such as this are considered adverse unless stated otherwise. It should also be noted that all effects are considered direct, long-term but non-permanent unless otherwise stated.
- 1.5 The assessment has been prepared through a desk study analysis of the site and its policy context to gain an appreciation of the landscape and visual context of the site.
- 1.6 Landscape proposals are illustrated in a plan at **Appendix 7** which conveys the landscape strategy for the site.

2. Methodology

2.1 This LVA has been undertaken in accordance with the principles of best practice, as outlined in published guidance documents listed in the reference section of this report, notably the third edition of the Guidelines for Landscape and Visual Assessment (GLVIA3), (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

2.2 The methodology and assessment criteria for the assessment have been developed in accordance with the principles established in this best practice document. It should be acknowledged that GLVIA3 establishes guidelines, not a specific methodology. The preface to GLVIA3 states:

2.3 *'This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.'*

2.4 The approach set out below and in detail in the Assessment Criteria at **Appendix 1** has therefore been developed specifically for this assessment to ensure that the methodology is fit for purpose.

Distinction between Landscape and Visual Effects

2.5 In accordance with GLVIA3, landscape and visual effects are assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- Landscape effects relate to the effects of the indicative proposals on the physical and perceptual characteristics of the landscape and its resulting character and quality; and
- Visual effects relate to the effects on specific views experienced by visual receptors and on visual amenity more generally.

Landscape and Visual Assessment Process

2.6 The assessment of landscape effects follows a recognised process set out below:

- Identify the baseline landscape resource (i.e. Individual landscape elements and a thorough understanding of landscape character both at a local scale and a wider scale) and its value;
- Evaluate the sensitivity of the landscape resource to the type of development proposed;
- Develop mitigation proposals / measures iteratively throughout the development process in order to avoid, reduce and ameliorate potential adverse landscape impacts and to maximise the beneficial landscape impacts of the development;
- Identify predicted landscape impacts of the development;
- Evaluate the magnitude of change to the baseline landscape resource; and
- Assess the level of residual effect of the development on the landscape.

2.7 The assessment of visual effects follows a similar process as set out below:

- Identify the geographical area within which views of the development are possible through field work;
- Identify potential visual receptors for the development (i.e. Groups of people who would have views of the development);
- Describe the nature of the baseline views towards the development for each receptor group, usually illustrated by a photograph;
- Evaluate the sensitivity of the visual receptor groups;
- Develop mitigation proposals / measures iteratively throughout the development process in order to avoid, reduce and ameliorate potential adverse visual impacts and to maximise the beneficial visual impacts of the development;
- Identify predicted visual impacts of the development on receptor groups;
- Evaluate the magnitude of change in the view of representative visual receptor groups; and
- Assess the level of residual effects on the views from representative receptor groups and on overall visual amenity.



Types of Landscape and Visual Impacts Considered and Duration

- 2.8 The LVA assesses both the permanent effects of the development and the temporary effects associated with its construction.
- 2.9 Consideration has been given to seasonal variations in the visibility of the development and these are described where necessary.
- 2.10 Both beneficial and adverse effects are identified in the assessment and reported as appropriate. Where effects are described as 'neutral' this is where beneficial effects are deemed to balance the adverse effects. The adverse and beneficial effects are communicated in each case so that the judgement is clear.
- 2.11 As part of the proposed development, new native woodland, tree and hedgerow planting would be introduced. Newly planted vegetation takes a number of years to mature and average growth rates have been taken into consideration in this assessment. The effectiveness of vegetation would improve over time (both in terms of integrating the development into the surrounding landscape and in providing visual screening) and this needs to be considered appropriately.
- 2.12 Therefore, permanent landscape and visual impacts of the project are assessed both in the winter of year 1 (the year in which the development is completed) and also in the summer of year 5 (5 years after completion of the development). In this second scenario it is assumed that vegetation planted as part of the development will have established and exhibit a degree of maturity.

Assumptions and Limitations of Assessment

Assessed Proposal

- 2.13 The project proposals have been developed iteratively in conjunction with the production of the LVA with the intention of incorporating mitigation into the project from the outset. The effects identified and described as part of this LVA are based on the landscape proposals shown on a plan at **Appendix 7**.

Baseline Information

- 2.14 The baseline landscape resource and visual receptors were identified in part through a desk-based study of Ordnance Survey mapping, published landscape character studies, relevant



planning policies, interrogation of aerial photography, as well as photographs taken and observations made during site work.

- 2.15 Access during site visits was restricted to publicly accessible locations or land within the ownership of the site landowner. No access was possible at the time of the site visit to private properties and therefore, assumptions have been made regarding the view from private properties. These assumptions have been based on an understanding of the properties and features present within the wider landscape gained during the site visit from publicly accessible locations. Assumptions are guided by professional experience and judgement.
- 2.16 A photographic record of views toward the site and its local context is provided in **Appendix 8**, with the photographic locations illustrated on a plan at **Appendix 6**.



3. Site Context

- 3.1 The site comprises primarily of agricultural land, separated into generally relatively large fields, with some dividing hedgerows and individual trees. Small woodland plantations are located adjacent to the site and woodland also serves to separate the north-western and south-eastern sections of the site.
- 3.2 A small number of properties are located near to the site, including within Saxon Place, Horton Kirby and along Mussenden Lane. Rookery Farm and Horsington House, are located adjacent to the M20 motorway, located between two parts of the site. Speedgate Farm complex is located close to the south-eastern area of the site, separated by agricultural fields.
- 3.3 The site lies close to a network of minor narrow roads, including Mussenden Lane which passes along the site boundary to the north and Gabriel Spring Road East to the south-east, both of which feature high hedgerows either side of the route.
- 3.4 A Public Right of Way (PROW) crosses the site to the south-east (Footpath Ref: SD333), as well as a PROW being located to the west of the site (Footpath Ref: SD156), however, most of the site is not publicly accessible. Large scale pylons with associated overhead powerlines cross the south-eastern part of the site. The M20 motorway forms a notable feature in the landscape immediately to the south of the site, with the Brands Hatch racing circuit lying a little further to the south.
- 3.5 The northern part of the site is generally sloping and undulating. The southern part of the site is generally flatter, forming part of an upland plateau landscape. Beyond Three Gates Road to the east of the site, land falls steeply away towards a local valley. To the south of the site, the M20 motorway is set within steep wooded embankments.



4. Designations and Policy Context

The Site and Surrounding Area

- 4.1 The application site is located within the administrative boundary of Sevenoaks District Council (SDC). This section provides an overview of the policies and designations of particular relevance to landscape and visual issues.

Landscape Designations

- 4.2 The site does not lie within a nationally designated landscape, however the site is located within the Green Belt. Green Belt matters are discussed separately in Section 8. The boundary of the Kent Downs Area of Outstanding Natural Beauty (AONB) lies approximately 0.6km to the south-west of the site at its closest point. Almost the entirety of the AONB would have no visibility of the proposals. Landscape Designations in the vicinity of the site are shown on a plan at **Appendix 5**.
- 4.3 The adjacent Horton Wood and Choaks Wood are identified as areas of Ancient Woodland and Local Wildlife Sites with a small area of Horton Wood also covered by a tree preservation order (TPO).
- 4.4 A number of listed buildings are located in proximity to the site including those associated with Mussenden Farm and Eglantine Farm to the west. Franks Hall grade II listed registered park and garden lies to the west of the site beyond Eglantine Lane. Horton Kirby Conservation Area partly covers the village, although the designation lies to the west of Forge Lane and Lombard Street. Matters relating to the setting of these assets are addressed in the Heritage Statement submitted separately with the planning application.
- 4.5 Most of the site is not publicly accessible. A single public right of way (PROW Footpath SD333) passes within the site, which runs from Speedgate Farm to the south-east before joining PROW Footpath SD156 which runs alongside the M20 motorway, crosses agricultural land towards Saxon Place to the south of Horton Kirby (Footpath SD156 runs through the site red line boundary, but beyond the fenceline of the proposed development). The Darent Valley Path long distance walking route follows the route of the River Darent, which is located to the west of Horton Kirby.



European Landscape Convention

- 4.6 The European Landscape Convention (ELC) is the first international convention to focus specifically on landscape. The convention promotes landscape protection, management and planning, as well as European co-operation on landscape issues. Signed by the UK Government in February 2006, the ELC became binding from March 2007. It applies to all landscapes, towns and villages, as well as open countryside; the coast and inland areas; and ordinary or even degraded landscapes, as well as those that are afforded protection.
- 4.7 The Government has stated that it considers the UK to be compliant with the ELC's requirements and in effect the principal requirements of the ELC are already enshrined in the existing suite of national policies and guidance on the assessment of landscape and visual effects.
- 4.8 The ELC defines landscape as: '*An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.*' (Council of Europe 2000).
- 4.9 It is important to recognise that the ELC does not require the preservation of all landscapes although landscape protection is one of the core themes of the convention. Equally important though is the requirement to manage and plan future landscape change.
- 4.10 The ELC highlights the importance of developing landscape policies dedicated to the protection, management and planning of landscapes. The analysis of landscape and visual matters in this LVA read in context with appropriate national and local policy will enable decisions to be made with due regard to landscape character as promoted by the ELC.

National Planning Policy

- 4.11 The National Planning Policy Framework (NPPF) was last updated by the Ministry of Housing, Communities and Local Government (MHCLG) in September 2023. This document sets out a general presumption in favour of sustainable development (paragraph 11) and guides the Local Planning Authorities in the production of Local Plans and in decision making.
- 4.12 In Section 14, the NPPF sets out its support for renewable and low carbon energy and associated infrastructure, with subsequent paragraphs setting out how this can be achieved.
- 4.13 Section 15 of the NPPF addresses 'conserving and enhancing the natural environment' stating that policies and decisions should contribute to this by "(a) *protecting and enhancing valued*



landscapes (noting that this should be commensurate with a statutory status or identified quality identified in a development plan)” and also “(b) recognising the ‘intrinsic character and beauty of the countryside”.

- 4.14 The site is not covered by any designation that recognises a specific landscape quality. However, the Site has some scenic and perceptual qualities relating to locally distinctive features in the form of tree lined hedgerows and the footpath which passes through the site. The landscape value of the site is discussed further in Section 6 which identifies that the site does not represent a ‘valued landscape’ as discussed in the NPPF.

Local Planning Policy

- 4.15 The current development plan for Sevenoaks District Council comprises the Core Strategy Development Plan (2011) and the Allocations and Development Management Plan (2015).
- 4.16 The policies of relevance to landscape and visual issues include Policy EN5 – Landscape.
- 4.17 It is acknowledged that Sevenoaks District Council are currently in the process of preparing their new Local Plan. A Call for Sites process has been undertaken and reported to the Local Authority Development and Conservation Advisory Committee in March 2022. The emerging Local Plan underwent consultation with the online survey concluding in January 2023.



5. Proposed Development

5.1 The proposed development comprises a ground mounted solar farm together with associated equipment and infrastructure.

5.2 The solar farm would consist of solar PV panels on metal arrays arranged in rows, allowing for boundary landscaping, perimeter fencing and access. The panels will have a maximum height of less than 3.6m (as shown on Figure 8 – O5009-RES-SOL-DR-PT-001 Rev 2, included within the wider planning application submission.) The arrays are spaced to avoid any shadowing effect from one panel to another with topography dictating exact row spacing that can range between 2 and 10 metres. The development will have an operational life of 40 years, after which time it will be decommissioned, the equipment will be removed and the land restored to its original condition.

5.3 The application comprises a number of agricultural field enclosures of approximately 99 hectares. The scheme will produce up to 49.9MW of renewable energy. The following features are anticipated to be included as part of the proposed solar development:

- *The installation of fixed-tilt, bi-facial, ground mounted solar arrays running from east to west across the site. The solar arrays will be maximum 3.6m in height including a minimum 0.7m ground clearance to allow for dual purpose renewable energy generation and agricultural sheep grazing. The solar panels will be angled at approximately 10–30° to the horizontal, in order to capture maximum radiation. Furthermore, the solar panels will have a non-reflective surface, which will increase the proportion of radiation absorbed, removing the risk of unwanted reflection and glare;*
- *Invertors/transformer units which will convert the Direct Current (DC) into an Alternating Current (AC) which is compatible with the National Grid;*
- *battery energy storage units connected to the inverters to help increase the flexibility and generation opportunities;*
- *Independent Distribution Network Operator (iDNO) substation;*
- *Grid connection to the existing overhead powerlines within the site;*



- *Internal access tracks, to allow for the construction and maintenance of the solar panels;*
- *As the proposed solar farm will require little maintenance, the site will be unmanned. In order to protect the installation, an unobtrusive deer fence will be installed around the perimeter of the site. CCTV cameras with infra-red lighting will be installed, where required, on the perimeter fence;*
- *Additional landscaping including hedgerow planting and improved biodiversity management. Limited waste will be produced and almost all elements are recyclable; and*
- *The operational lifetime of the proposed development is 40 years and is therefore considered to be a temporary project.*

5.4 Each inverter/battery storage compound location will include the following equipment (as shown on Figure 12 05009-RES-SOL-DR-PT-002 Rev 1, included within the wider planning application submission):

- *Hardstanding (for set down);*
- *1 x inverter which includes: inverter and busplus cabinet, and transformer. Each inverter is approx. 3m width x 5m length x 3m height;*
- *4 x DC Converter cabinets; and*
- *2 x battery storage containers (with HVAC) attached at the short end. Each container is approx. 2.5m width x 6.5m length x 3m height.*

5.5 The battery containers are typically modified ISO-style shipping containers set on concrete foundations, with heating ventilation and air conditioning (HVAC) units. The containers are generally finished in a shade of white or grey.

5.6 The site has been assessed for its suitability and has available grid capacity with a connection proposed within the site to the existing 132kv grid infrastructure. Following the results of recent environmental and engineering surveys, we have included a minor change to the red line boundary in the south eastern side of the project and identified a location adjacent to the northern boundary of the M20 and adjacent to the existing grid infrastructure for grid connection. This location will benefit from the existing vegetation along the highway and



additional screening proposed by the Chimmens Solar Farm.

Mitigation Proposals

- 5.7 In order to mitigate against landscape and visual impacts, the landscape proposals as illustrated on the plan at **Appendix 7**, takes account of the identified areas of sensitivity by providing additional planting where required and any relevant maintenance notes for existing planting.
- 5.8 Care has been taken to retain existing trees and hedgerows where possible, to retain the character of the local area, to maintain existing visual buffers and to maintain biodiversity value. The proposals would only result in some small losses of hedgerow around field access points.
- 5.9 The Landscape Masterplan (Pegasus Drawing No: P22-1221_EN_0012) shows the following enhancements including, but not limited to:
- *Retention, protection and enhancement of existing trees, hedgerows and woodland, with new native tree and hedgerow species where appropriate;*
 - *Provision of new native infill planting where gaps are present in the existing field boundary hedgerows, to further define field boundaries and provide additional visual enclosure;*
 - *Provision of new native hedgerows (more than 4,000m) to define field boundaries where none are present, or have been lost over time and incorporating scattered trees where practical and feasible;*
 - *Provision of a new native woodland planting belt (480m in length) to provide additional visual enclosure of the proposals along the northern boundary. This would provide a level of further screening of the development in views from Horton Kirby;*
 - *Enhancement of site boundary margins and areas underneath solar panels, through proposed species rich grassland be managed through low intensity grazing by sheep;*
 - *Physical offsets to be provided from the Public Rights of Way that cross the site, for example, PROW SD333 which crosses the southern section of the site, benefits from 11.5m space between perimeter fences;*
 - *Creation of approximately 35 acres of skylark habitat; and*
 - *Ongoing landscape management of planting during the lifetime of the solar farm.*

6. Landscape Baseline and Effects

Introduction

- 6.1 The assessment of Landscape Effects deals with the changes to the landscape as a resource. Different combinations of the physical, natural and cultural components (including aesthetic, perceptual and experiential aspects) of the landscape and their spatial distribution create the distinctive character of landscapes in different places.
- 6.2 Effects are considered in relation to both landscape features and landscape character during construction, at Year 1 and at Year 5 and beyond. The sensitivity of landscape features is a function of both their susceptibility and value, as discussed further in the Assessment Criteria at Appendix 1. A summary of landscape effects is included in **Table 1**.

Landscape Features

Landform and Topography

- 6.3 The northern part of the site is generally sloping and undulating. The southern part of the site is generally flatter, forming an upland plateau. Overall, the susceptibility of the landform and topography of the site is judged to be medium and its value is judged to be medium. Therefore, the sensitivity is judged to be no greater than medium. There would be limited changes to the landform of the site to accommodate the associated structures, including fencing and CCTV. However, the solar panels would not require any foundations, with the metal frame being driven into the ground (usually to between 1.5m and 1.7m depending upon ground conditions).
- 6.4 There would be largely no change to the topography of the site. The magnitude of change therefore is considered to be no greater than very low, which would result in no more than Minor Adverse levels of effects during all periods, which would be non-permanent.

Watercourses and Drainage

- 6.5 There are no watercourses or drainage features within the site and therefore no effect on watercourses or drainage features as a result of the proposed development.



Land Use, Buildings and Infrastructure

- 6.6 The site comprises a series of arable fields that are mostly irregular in shape. There is no built form on the site, however, a series of farm tracks cross the site and are to be reused where practical for the access tracks for the solar farm, in particular where these pass through the Ancient Woodland adjacent to the site. A Public Right of Way (PROW footpath Ref: SD333) crosses the site to the south-east, however, most of the site is not publicly accessible (Footpath SD156 runs through the site red line boundary, but beyond the fenceline of the proposed development). Large scale pylons with associated overhead powerlines cross the south-eastern part of the site.
- 6.7 Although the site is greenfield, it is typical of the surrounding agricultural landscape. The susceptibility is judged to be medium and the value is judged to be medium. Overall therefore, the land use of the site is deemed to have a medium sensitivity to the proposed development.
- 6.8 The proposals would represent a change to the current land use from agricultural fields to an operational solar farm with additional ancillary infrastructure. As such, the magnitude of change is assessed as high, resulting in a Major-Moderate Adverse level of effect during all periods, but one which is ultimately reversible at the end of life of the solar farm and therefore non-permanent.

Vegetation

- 6.9 The site is located within a landscape made up of agricultural land interspersed with small and large areas of woodland with well defined native field boundary hedgerows, with some being tree lined. The adjacent Horton Wood and Choaks Wood are identified as areas of Ancient Woodland.
- 6.10 The pattern of vegetation within the site is typical of the surrounding landscape. Although the site features trees and vegetation which in the main are limited to the field boundaries, some of these are gappy and open across several sections. The susceptibility of the vegetation at the site, outwith the Ancient Woodland, is judged to be medium and the value is judged to be medium. It is therefore deemed that the vegetation within the site would have a medium sensitivity. The adjacent Horton Wood and Choaks Wood areas of Ancient Woodland have a high susceptibility and value.
- 6.11 During construction, trees, woodland and hedgerows within and surrounding the immediate site would be protected. Some limited loss of existing hedgerows would occur in proximity to access

points, however this would be minimised wherever possible. For context, within the site, existing field access locations are used where possible. There are three locations where limited hedgerow will be removed to create new access for the internal solar tracks.

- 6.12 There would be no impact to the adjacent Horton Wood and Choaks Wood areas of Ancient Woodland, or their buffer zone. Some of the existing farm tracks which pass within the Ancient Woodland or its buffer zone would be utilised as part of the proposed development, however in these instances the existing tracks would be reinforced with a cellular confinement system, ensuring a sensitive 'no-dig' approach in proximity to the Ancient Woodland and its buffer zone. A low magnitude of change is predicted during construction as a consequence of the very limited vegetation loss outside of the Ancient Woodland and its buffer zone, resulting in a Minor Adverse level of effect in the short-term. No effects would arise to the Ancient Woodland or its buffer zone.
- 6.13 At Year 1, all proposed mitigation planting illustrated on the plan at Appendix 7 would be in place, albeit that it would be yet to mature. As a result, a low magnitude of change to vegetation outside of the Ancient Woodland and its buffer zone would occur at Year 1, resulting in a Minor Beneficial level of effect.
- 6.14 As mitigation planting matures, the proposed vegetation would integrate the development with its surroundings, resulting in further localised benefits within the site. At Year 5, a medium-low magnitude of change is predicted to vegetation outside of the Ancient Woodland and its buffer zone, resulting a long-term Moderate to Minor Beneficial level of effect.

Landscape Character

- 6.15 This section provides an overview of the landscape character of the site and its locality. It provides an indication of the sensitivity of the landscape character to the proposed development and the resulting effects which would arise from the development proposals. The sensitivity of landscape character areas is a function of both susceptibility and value, as discussed further in the Assessment Criteria at **Appendix 1**.

National Level Landscape Character

- 6.16 The site falls within National Character Area 119, North Downs. The Key Characteristics of NCA 119 are as follows:



- *Cretaceous Chalk forms the backbone of the North Downs. A distinctive chalk downland ridge rises up from the surrounding land, with a steep scarp slope to the south providing extensive views across Kent, Surrey and Sussex and across the Channel seascape to France.*
- *The broad dip slope gradually drops towards the Thames and the English Channel, affording extensive views across London and the Thames Estuary. The carved topography provides a series of dry valleys, ridges and plateaux.*
- *Chalk soils are predominant across the NCA but the upper part of the dip slope is capped by extensive clay-with-flint deposits. Patches of clay and sandy soils also occur with coombe deposits common in dry valleys.*
- *The North Downs end at the dramatic White Cliffs of Dover, one of the country's most distinctive and famous landmarks. Most of the coast between Kingsdown and Folkestone is unprotected, allowing for natural processes. The cliffs are home to internationally important maritime cliff-top and cliff-ledge vegetation.*
- *The area is cut by the deep valleys of the Stour, Medway, Darent, Wey and Mole. The river valleys cut through the chalk ridge, providing distinctive local landscapes which contrast with the steep scarp slope.*
- *The south-facing scarp is incised by a number of short, bowl-shaped dry valleys, cut by periglacial streams and often referred to as combes. The undulating topography of the dip slope has also been etched by streams and rivers, today forming dry valleys, some of which carry winterbournes that occasionally flow in the dip slope, depending on the level of the chalk aquifer.*

6.17 This national level assessment gives a broad impression of a region and provides a useful contextual overview of the character of the wider landscape. However, the proposed development is not considered to have the potential to result in any perceptible effects on landscape character at this national scale and to remain proportionate to the small scale of the site in relation to the NCA, focus is placed upon the County and District level landscape character assessments.

Kent Landscape Character Assessment

- 6.18 The Landscape Assessment of Kent was published in 2004. The study identifies the site to lie within the North West Kent Landscape Character Area, with the northern part of the site located within the Darent Downs Landscape Character Type and the southern part of the site located within the Ash Downs Landscape Character Type. The location of the site in relation to these LCAs is shown on the plan at **Appendix 4a**. The assessment provides helpful additional detail regarding landscape character, but as the Sevenoaks Landscape Character Assessment was published more recently in 2017 and focusses in more detail on the area in and around the site, the Character Types set out in the Kent wide assessment are not considered further with the exception of that part of the landscape to the north west of the site which lies within Dartford District, where a District level study has not been produced.

Sevenoaks Landscape Character Assessment

- 6.19 The site lies within the '2b – Eynsford and Horton Kirby Downs' landscape character area (LCA) of the '2 – Downs' landscape character type (LCT), as identified within the Sevenoaks Landscape Character Assessment, January 2017.
- 6.20 In the wider context of the site, the 7a Darent valley – South Darent to Farningham and 7b Farningham to Otford LCAs lie to the north-west, with the 2a Farningham Downs LCA beyond. To the east lies the 1b Fawkham and Hartley Settled Downs LCA with the 1a West Kingsdown Settled Downs and the 1c Ash-cum-Ridley Settled downs to the south-east.
- 6.21 The location of the site in relation to these LCAs is shown on the plan at **Appendix 4b**.
- 6.22 The key characteristics of LCA '2b – Eynsford and Horton Kirby Downs' are set out in the Character Assessment as follows:
- *Gently undulating chalk landscape with deep dry valleys, broad plateau tops and a steep slope adjacent to the Darent Valley.*
 - *Medium-large scale parliamentary field pattern used for arable crops and pasture, enclosed by mature hedgerows or post and wire.*
 - *Small paddocks are associated with farmsteads and chalk grassland survives on some steeper slopes.*

- *Mixed woodland on valley ridgelines and on valley slopes, including areas of coppice.*
- *Scattered, isolated farmsteads often with traditional flint and weatherboard buildings.*
- *Small isolated hamlets with some vernacular flint and weatherboard houses.*
- *Narrow winding lanes, contained by banks juxtapose with the busy roads of A20/M20.*
- *Mostly rural and tranquil, although there is urban development adjacent to South Darenth and at Horton Kirby.*
- *Strong feeling of enclosure in the woodlands contrasts with long views along the Darent Valley from the valley sides and across the Eynsford Downs.*
- *Views towards London from high ground.*

6.23 A number of key sensitives and valued attributes are identified within 2b – Eynsford and Horton Kirby Downs LCA, with those relevant to the site set out below:

- *Small copses of broadleaved woodland which provide valued semi-natural habitat and contribute to visual interest, including...Horton Woods which is designated as a Local Wildlife Site.*
- *Remnant historic settlement pattern, with isolated farm buildings of a traditional flint, weatherboard and brick vernacular accessed by narrow, winding lanes lined with hedged banks...*
- *The historic landscape pattern, with frequent woodlands on the ridgelines and areas of intact hedgerows which provide a sense of history and ecological connectivity.*
- *Areas which retain traditional land uses including lavender farms and hop gardens.*
- *Long, open views over adjacent Downs to the north which include south London and views funnelled along the valley floors between the wooded ridgelines which contrast with the sense of enclosure afforded by the topography and the woodland cover.*
- *The dramatic landform of the ridges and deep dry valleys which are typical of a chalk landscape and the sense of tranquillity within them.*



Effects on LCA 2b – Eynsford and Horton Kirby Downs

- 6.24 The site is largely typical of the landscape character of the Eynsford and Horton Kirby Downs, consisting of a gently sloping undulating arable landform throughout most of the area, with flatter ground towards the south, forming an upper plateau of the downs.
- 6.25 The susceptibility of this part of LCA 2b to a development of the type proposed is considered to be medium, on the basis that the site is currently a series of undeveloped agricultural fields, albeit that some element of existing development surrounds and is visible from the site and forms a component of this part of the LCA. In terms of the value of this part of LCA 2b, it is not covered by any designation that recognises a specific landscape or scenic importance and there are no Listed Buildings or identified historical or ecological interests directly associated with the site. Whilst it contains some elements of value, in the form of the existing trees and hedgerows, the adjacent Ancient Woodland and the PROW which cross the site, the site is not accessible for public access beyond these paths and is of a nature which is not rare in the local landscape. On balance therefore it is judged that the landscape value of the site is medium. Overall, as an area of agricultural land typical in its context with many other comparable fields in the wider landscape, with a medium susceptibility and a medium value, the character of LCA 2b is therefore considered to be of medium sensitivity to the proposed development.
- 6.26 Due to the scale of the proposed development within this LCA, the proposals would introduce a notable feature into a predominantly agricultural landscape which would change the physical and perceptual attributes of the site itself, but would have a relatively limited influence on the wider local landscape, due the visual containment provided by the rolling landscape and the surrounding hedgerow field boundaries tree cover. In particular, there would be no effects on that part of LCA 2b to the south of the M20 motorway, which runs immediately to the south of the site. Therefore, it is predicted that the proposed development would give rise to a medium to low magnitude of change upon LCA 2b during construction and at Year 1, which would result in a Moderate to Minor Adverse level of effect.
- 6.27 Although existing elements would be retained and protected, with the proposed development introducing a number of enhancements in the form of additional tree and hedgerow planting, the proposals would likely still form a noticeable change to the physical and perceptual attributes of a small part of the LCA. Therefore, a Moderate to Minor Adverse level of effect would continue to be experienced at Year 5.



Effects on other LCAs

- 6.28 The only other Sevenoaks LCAs in the surrounding landscape which would have any visibility of the proposals would be LCA 7a Darent valley – South Darent to Farningham and LCA 2a Farningham Downs.
- 6.29 Visibility in LCA 7a Darent valley – South Darent to Farningham would be limited primarily to the higher ground around Dartford Road, as illustrated by Viewpoint 10, for which photomontages have also been prepared and included at Appendix 9. From here the proposals would be seen on the higher ground on the opposite side of the valley, but, at a distance of over 1.5km, would not be a prominent feature in the view. Therefore, it is predicted that the proposed development would give rise to a low magnitude of change upon that part of LCA 7a in the vicinity of Dartford Road during construction and at Year 1, which would result in a Minor Adverse level of effect. Following the introduction of the additional tree and hedgerow planting, the impact of the proposals would be reduced to some degree, however a Minor Adverse level of effect would continue to be experienced at Year 5.
- 6.30 LCA 2a Farningham Downs lies beyond LCA 7a, but its elevated nature is such that long distance views towards the site would be available from part of the LCA as illustrated by Viewpoint 12, taken from an informal path adjacent to Farningham Wood Nature Reserve. However, at a distance of around 2.5km from the site the development would not be a prominent feature in the view and would be seen alongside the built development of Horton Kirby and also with prominent agricultural polytunnels present in the foreground of the view at the time of the site visit. It is also relevant that much of the LCA is covered by Farningham Wood within which no views of the scheme would be visible. In this context it is predicted that the proposed development would give rise to a low magnitude of change upon that part of LCA 2a from which the scheme could be seen during construction, Year 1 and Year 15, which would result in a Minor Adverse level of effect.
- 6.31 The Farningham Downs area runs up to the boundary with Dartford District whereafter the Kent Landscape Assessment identifies the landscape to be part of the same broader Darent Downs area. The same findings as were identified for LCA 2a would therefore apply equally to that part of the landscape which crosses the boundary into Dartford district, with no more than a minor effect on the Darent Downs Landscape Character Type in the Dartford District, in the area north-west of Dartford Road running up to the M25.

Effects on the Landscape Character of the Site and Immediate Surroundings

- 6.32 The site is largely typical of the landscape character of the Eynsford and Horton Kirby Downs, featuring a number of characteristic elements, some of which are recognised as having a specific landscape quality (e.g. the trees, hedgerows and the adjacent ancient woodland). The susceptibility of the landscape of the site itself to a development of the type proposed is considered to be medium, on the basis that the site is currently a series of typical undeveloped agricultural fields, which have some element of existing development visible within its surroundings. In terms of the value of the site, it is not covered by any designation that recognises a specific landscape or scenic importance (noting the Ancient Woodland lies adjacent to the site) and there are no Listed Buildings or identified historical or ecological interests with which it is directly associated. Whilst it contains some elements of value, in the form of the existing trees and hedgerows, adjacent ancient woodland, and the PROW which cross the site, it is not accessible for public access beyond these paths and is of a nature which is not rare in the local landscape. On balance therefore it is judged that the landscape value of the site is medium and not therefore a 'valued landscape' as discussed in the NPPF. Overall, as an area of agricultural land typical in its context with many other comparable fields in the wider landscape, with a medium susceptibility and a medium value, the character of the site is therefore considered to be of medium sensitivity to the proposed development.
- 6.33 The landscape character of the site and its surroundings has the potential to be influenced to a degree by the proposed development, albeit that no impacts would arise to the south of the site due to topography and the existing vegetation lining the M20 motorway and also to the east due to topography and screening by Horton Wood. The proposed development would introduce a new man-made feature into the landscape of the site. Although of only a limited height it would cover most of the site area and therefore would adversely alter the physical and perceptual attributes of the site. It is acknowledged however, that the layout would allow retention of all notable landscape features within and surrounding the site, including the ancient woodland, as well as seeking to enhance and supplement those features further. The proposed development's influence upon the surroundings would also be limited by the network of mature hedgerow field boundaries and vegetation such that the actual visibility from much of the surrounding landscape would be a lot less than that illustrated on the SZTV (**Appendix 6**).
- 6.34 The magnitude of change to the site itself is assessed as high, which when combined with its medium sensitivity, would result in a Moderate to Major Adverse level of effect upon the

landscape character during construction and at Year 1. With the introduction of a number of additional enhancements in the form of tree and hedgerow planting along with the creation of new grassland and the management and enhancement of existing hedgerows, there would be some improvements to the physical and perceptual attributes of the site by Year 5 and beyond, but a high magnitude of change and Moderate to Major Adverse would remain.

Landscape Designations

Kent Downs Area of Outstanding Natural Beauty

- 6.35 The boundary of the Kent Downs Area of Outstanding Natural Beauty (AONB) lies approximately 0.6km to the south-west of the site at its closest point. However, almost the entirety of the AONB would have no visibility of the proposals, with no more than glimpsed views available as worst case, with intervening vegetation limiting any potential views even further in reality than the very limited areas shown as having potential for visibility on the SZTV. There would be no more than a negligible effect on the AONB and for the vast majority no effect at all.

Franks Hall Registered Park and Garden

- 6.36 Franks Hall Registered Park and Garden lies to the north-west of the site. There would be no visibility of the proposals from the area with intervening vegetation limiting any potential views even further in reality than the very limited areas shown as having potential for visibility on the SZTV. There would be no effect on the Registered Park and Garden.

Table 1 – Summary of Landscape Effects

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
Landscape Features				
Landform and topography	Low	Construction	Very low	Minor adverse
		Year 1	Very low	Minor adverse
		Year 5	Very low	Minor adverse
Land use	Medium	Construction	High	Major-Moderate adverse

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
		Year 1	High	Major-Moderate adverse
		Year 15	High	Major-Moderate adverse
Water features and drainage	Medium	Construction	None	No effect
		Year 1	None	No effect
		Year 15	None	No effect
Vegetation	Medium	Construction	Low	Minor adverse
		Year 1	Low	Minor beneficial
		Year 1	Medium-Low	Moderate to Minor beneficial
Ancient Woodland	High	Construction	None	No effect
		Year 1	None	No effect
		Year 5	None	No effect
Landscape Character				
LCA 2b - Eynsford and Horton Kirby Downs	Medium	Construction	Medium-Low	Moderate-Minor adverse
		Year 1	Medium-Low	Moderate-Minor adverse
		Year 5	Medium-Low	Moderate-Minor adverse
LCA 7a Darent valley - South Darent to Farningham	Medium	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse
LCA 2a Farningham Downs		Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
The site itself	Medium	Construction	High	Moderate to Major adverse
		Year 1	High	Moderate to Major adverse
		Year 15	High	Moderate to Major adverse
Landscape Designations				
<i>Kent Downs Area of Outstanding Natural Beauty</i>	High	All Phases	None	No effect
<i>Franks Hall Registered Park and Garden</i>	High	All Phases	None	No effect

7. Visual Effects

Introduction

- 7.1 An assessment of visual effects considers the potential for changes in views and visual amenity. The aim is to establish the area in which the development may be visible, the different groups of people who may experience views of the development, the places where they will be affected, and the nature of the views and visual amenity (meaning the overall quality and pleasantness to a view).
- 7.2 Effects are considered during construction, at Year 1 and at Year 5 and beyond. New planting takes a number of years to mature and average growth rates have been taken into consideration. The effectiveness of the vegetation both in terms of integrating the development into the surrounding landscape and in providing visual screening would improve over time and needs to be considered appropriately. A summary of visual effects is included in Table 2.
- 7.3 A photographic record is included in **Appendix 8** with the viewpoint locations shown on the plan at **Appendix 6**. A number of the viewpoints illustrate locations where visibility of the proposals may have been available in earlier iterations of the scheme, but which would no longer have any visibility of the proposals following the iterative design process. They are nonetheless considered helpful in demonstrating areas close to the site from which there would be no views of the scheme.

Zone of Theoretical Visibility

- 7.4 The Screened Zone of Theoretical Visibility (**Appendix 6**) identifies the potential locations from which the development may be visible. The Screened Zone of Theoretical Visibility (SZTV) has been produced using Digital Terrain Modelling (DTM) and LIDAR data. Existing built development (8m tall) and larger blocks of woodland have also been modelled (15m tall) to take account of the screening effect that these would provide. However, the screening effect provided by smaller blocks of woodland and hedgerows/hedgerow trees, particularly those surrounding the site, have not been taken into account, and consequently the actual extent of the area from which the proposed development is visible is likely to be much smaller.
- 7.5 The SZTV has been run at a height of 3.6m across the site for the elements which form the Proposed Development.



Sensitivity

- 7.6 Residential receptors and users of Public Rights of Way (PRoW) are considered to have a high visual sensitivity to the change proposed. In all cases they were considered to have a high susceptibility to changes in their views and that these views were of a high value. Users of the local minor road network, where the view is not the focus of the activity are considered to have medium sensitivity, which is a combination of a medium susceptibility and medium value associated with the views from these routes. People using nearby A-roads are considered to have low sensitivity, reflecting the low susceptibility and value associated with the views from these routes.
- 7.7 The approach to sensitivity of visual receptors is set out in **Appendix 1**.

Residential Receptors

- 7.8 For the purpose of this assessment, it is assumed as a worst-case, that all nearby dwellings are permanent residences.
- 7.9 Of the properties located within the area immediately surrounding the site, there are only a relatively small number from which potential visibility of the development would arise and whereby the change to views could be considered as being more than incidental. These are discussed further below. The remainder of residential properties in the area around the site would have no views of the development, including from the villages of Farningham, South Darenth, Longfield, Hartley, New Ash Green, West Kingsdown and Eynsford.

Horton Kirby

- 7.10 Horton Kirby lies to the north of the site. The main part of the village (e.g. around Forge Lane, Bull Hill, Horton Road, The Street and Lombard Street) lies around 1km from the site and would have no views of the proposals.
- 7.11 A small number of properties at the northern end of School Lane which have south facing aspects may have the potential for views of the proposals. Viewpoint 7 illustrates the views from School Lane, just along from these properties, for which photomontages have also been prepared and included at Appendix 9. From here a small part of the scheme would be seen within the wider panorama looking out towards the rolling Downs landscape. Views would however be relatively limited in extent and nature. A medium to low magnitude of change is



predicted during construction and at Year 1, resulting in a Minor Adverse level of effect. Once the new screen planting proposed along the northern boundary of the site has established, any views towards the proposed development would be filtered further. A medium to low magnitude of change is predicted at Year 5, resulting in a Minor Adverse level of effect.

7.12 Further away from the centre of the village and closer to the site there are a small number of properties at the northern end of Mussenden Lane which would have the potential for views of the proposals (Bluebell Cottage, The Oast Hose, properties at Mussenden Farm and Mussenden Cottage). These properties generally have some degree of existing vegetation in their gardens or curtilage which would serve to limit views. In addition, the proposals are set back from the properties by at least 200m and a new planting buffer is proposed along the closest edge of the development to further reduce the potential for impacts. Nonetheless, it is acknowledged that there would be potential for a medium magnitude of change during construction and at Year 1, resulting in a Moderate Adverse level of effect. Once the new native planting proposed along the northern boundary of the site has established, any views towards the proposed development would be filtered further. A medium magnitude of change would however remain at Year 5, resulting in a Moderate Adverse level of effect.

7.13 Saxon Place is a residential area to the south of the main village centre of Horton Kirby. Most of the properties would have no views of the development due to topography and screening by other intervening properties, however there would be the potential for views from a small number of properties on the eastern edge of Saxon Place. Some of the properties have existing vegetation in their gardens which would serve to limit views. In addition, the proposals are set back from the properties by at least 200m and a new planting buffer is proposed along the closest edge of the development to further reduce the potential for impacts. Nonetheless, it is acknowledged that there would be potential for a medium magnitude of change during construction and at Year 1, resulting in a Moderate Adverse level of effect. Once the new native planting proposed along the northern boundary of the site has established, any views towards the proposed development would be filtered further. A medium magnitude of change would however remain at Year 5, resulting in a Moderate Adverse level of effect.

Properties on Mussenden Lane adjacent to Horton Wood

7.14 A small cluster of residential properties are located at Fairhavens on Mussenden Lane adjacent to Horton Wood. Not all of the properties would have direct views towards the site and some would have views partly screened by the existing vegetation along Mussenden Lane. In addition,

the proposals are set back at least 100m from the properties, with further planting proposed to reduce potential impacts and much of the scheme lying beyond the foreground topography. Nonetheless, it is acknowledged that there would be potential for a medium magnitude of change during construction and at Year 1, resulting in a Moderate Adverse level of effect. Once the new native planting proposed along the northern boundary of the site has established, any views towards the proposed development would be filtered further. A medium magnitude of change would however remain at Year 5, resulting in a Moderate Adverse level of effect.

Properties on Dartford Road (A225)

- 7.15 There are a small number of properties which lie along the Dartford Road (A225) which would have potential for views of the site due to their elevated location. Viewpoint 10, for which photomontages have also been prepared and included at Appendix 9, is representative of this location. From here the proposals would be seen on the higher ground on the opposite side of the valley, but at a distance of over 1.5km, would not be a prominent feature in the view. Therefore, it is predicted that the proposed development would give rise to a low magnitude of change on those properties on Dartford Road with an open aspect facing towards the site during construction and at Year 1, which would result in a Minor Adverse level of effect. Following the introduction of the additional tree and hedgerow planting, the impact of the proposals would be reduced to some degree, however a Minor Adverse level of effect would continue to be experienced at Year 5.

Properties on Sparepenny Road, Farningham

- 7.16 The SZTV illustrates the potential for a small area of visibility on Sparepenny Road, Farningham. However, there is extensive existing vegetation in this area which would notably restrict the potential for views from almost all the properties in this area. Any views which are available are likely to be heavily filtered by vegetation resulting in no more than a negligible effect.

Properties on Rabbits Road

- 7.17 There are a small number of properties which lie along the Rabbits Road, near to the junction with Wilson Lane, which would have potential for views of the site due to their elevated location. Viewpoint 13 illustrates the views from this area and demonstrates that any views of the proposals would be no more than a glimpse, which at a distance of around 2km would result in no more than a negligible effect.



Recreational Receptors

PROW SD156

- 7.18 Footpath SD156 runs south from Horton Kirby and Saxon Place, passing firstly to the west of the site and then running alongside the south-western edge of the development before crossing the M20 motorway via a footbridge and heading south to Gabriel Spring Road West.
- 7.19 Viewpoint 5, for which photomontages have also been prepared and included at Appendix 9, illustrates the view from the section of the route which runs to the west of the site, where more open views are available. From this section of the route there would be potential for a medium magnitude of change during construction and at Year 1, resulting in a Moderate Adverse level of effect. Once the new native planting proposed within the site has established, any views towards the proposed development would be filtered further. A medium magnitude of change would however remain at Year 5, resulting in a Moderate Adverse level of effect.
- 7.20 Further southwards along the route the footpath potential views of the site become further screened by the existing mature vegetation which lines the site boundary. This is illustrated by Viewpoint 4, taken from the point at which the route meets the M20 motorway embankment. From this section of Footpath SD156, the effects would be no greater than minor. Thereafter the route of SD156 runs along the edge of the vegetation which lines the motorway embankment, and in some points through this vegetation, until the point where it turns to cross the motorway, via the footbridge. As such, the route would pass adjacent to the development proposals, but with a good separation such that the panels would not appear dominant in views from the route. From this section of the route there would be potential for a medium magnitude of change during construction and Year 1, resulting in a Moderate Adverse level of effect. Once the additional vegetation planting along the south-western boundary of the site begins to establish the magnitude of change at Year 5 would reduce to low, resulting in a minor effect.
- 7.21 Once the route turns to cross the motorway, via the footbridge there would be no further visibility of the proposals as SD156 runs south down to Gabriel Spring Road West.

PROW SD333

- 7.22 Footpath SD333 runs between Footpath SD156 and Three Gates Road. Starting at the point where Footpath SD156 turns to cross the motorway, via the footbridge, the route of SD333 runs through the proposed development for a short distance, around 250m in length from which



there would be panels to both the north and the south, albeit well separated from the route and with space between the areas of panels such that views would not contain panels in the full arc of the view. From this section of the route there would be potential for a high magnitude of change, resulting in a Major Adverse level of effect.

- 7.23 The route then passes into the woodland from which no views of the scheme would be available before heading out towards Speedgate Farm for a short section from which there may be potential for limited views towards the proposed substation, but which would give rise to no more than a low magnitude and a minor effect.

PROW SD43

- 7.24 Footpath SD43 runs to the north of Horton Kirby and for a short section passes over an area of more elevated ground from which there would be the potential for views of the development. This extends to the vicinity of Viewpoint 13 on Rabbits Road. However, due to the undulating nature of the topography any views would generally be no more than a glimpse which would result in no more than a low magnitude and a minor effect.

PROW DR80 and DR120

- 7.25 Footpaths DR80 and DR 120 both run on elevated ground to the north-west of Horton Kirby over 2km from the site. Viewpoint 11 was taken from this area and illustrates the overhead powerline and agricultural polytunnels that are prominent in views in this area. The site would be seen on elevated ground on the opposite side of the valley, but any potential impact would be limited with no more than a low magnitude and a minor effect arising.

Darent Valley Path

- 7.26 The Darent Valley Path runs for 19 miles between Dartford and Sevenoaks and passes Horton Kirby to the north of the site. Due to the generally low lying route of the path along the river valley, there is very limited potential for any visibility of the proposals. Once the additional screening of vegetation in the landscape is considered there would be no effects on the route.

Road Users

Mussenden Lane

- 7.27 Mussenden Lane runs along the north-eastern boundary of the site. The route is generally lined with mature hedgerows which limit the potential for any views of the development. As such, the theoretical visibility along the road indicated by the SZTV would in fact not be available for the majority of its length. The only area where views would be available would be a short section in the vicinity of the small group of properties at Fairhavens. From this very short section the proposals are set back from the road to some degree, with further planting proposed to reduce potential impacts and much of the scheme lying beyond the foreground topography. Nonetheless, it is acknowledged that there would be potential for a medium magnitude of change during construction and at Year 1, resulting in a Moderate-minor Adverse level of effect. Once the new native planting proposed along the northern boundary of the site has established, any views towards the proposed development would be filtered further. A medium magnitude of change would however remain at Year 5, resulting in a Moderate-minor Adverse level of effect.

School Lane

- 7.28 School Lane runs to the north-east of the site. Like Mussenden Lane, it is largely lined with mature hedgerows which limit the potential for any views of the development. As such, the theoretical visibility along the road indicated by the SZTV would in fact not be available. There is one small break in the vegetation in the vicinity of Viewpoint 8, however even here topography would largely screen the development with any effects being no more than negligible.

Rabbits Road

- 7.29 Rabbits Road runs to the north of the site. The SZTV indicates the potential for theoretical visibility in this area, but in reality once additional intervening vegetation is considered any views of the proposals would be no more than glimpses, with any effects being no more than negligible. This can be seen with reference to Viewpoint 13, which illustrates the limited availability of any views.

M20

- 7.30 The M20 runs to the south and west of the site. For the majority of its length there would be no views of the proposed development, with any visibility limited to a short section of the route as

it runs to the north of Farningham. These views would be to those travelling in an eastbound direction only and would be of the scheme seen at a distance of over 1.5km. The development would be seen on the elevated ground in the distance of the view and would not be a prominent feature in the context of the motorway infrastructure and vehicles in the foreground of the view. There would be more than a low magnitude and a minor effect.

Dartford Road (A225)

7.31 The A225 Dartford Road runs between Dartford and Sevenoaks, passing on elevated ground to the north-east of Horton Kirby. Much of the route would have no visibility of the proposals, but for a short section the proposals would be seen on the higher ground on the opposite side of the valley. Viewpoint 10, for which photomontages have also been prepared and included at Appendix 9, is representative of this location. From here the proposals would be seen at a distance of over 1.5km and would not be a prominent feature in the view. Therefore, it is predicted that the proposed development would give rise to a low magnitude of change on users of Dartford Road, which would result in a Minor Adverse level of effect.

Table 2 – Summary of Visual Effects

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
Residential receptors				
<i>Horton Kirby – main part of the village</i>	High	Construction	None	No Effect
		Year 1	None	No Effect
		Year 5	None	No Effect
<i>Horton Kirby – properties at the northern end of School Lane</i>	High	Construction	Medium to Low	Minor adverse
		Year 1	Medium to Low	Minor adverse

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
		Year 5	Medium to Low	Minor adverse
<i>Horton Kirby – properties at the northern end of Mussenden Lane</i>	High	Construction	Medium	Moderate adverse
		Year 1	Medium	Moderate adverse
		Year 5	Medium	Moderate adverse
<i>Horton Kirby – Saxon Place</i>	High	Construction	Medium	Moderate adverse
		Year 1	Medium	Moderate adverse
		Year 5	Medium	Moderate adverse
<i>Properties on Mussenden Lane adjacent to Horton Wood</i>	High	Construction	Medium	Moderate adverse
		Year 1	Medium	Moderate adverse
		Year 5	Medium	Moderate adverse
<i>Properties on Dartford Road (A225)</i>	High	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse
<i>Properties on Sparepenny Road, Farningham</i>	High	Construction	Very Low	Negligible
		Year 1	Very Low	Negligible
		Year 5	Very Low	Negligible

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
<i>Properties on Rabbits Road</i>	High	Construction	Very Low	Negligible
		Year 1	Very Low	Negligible
		Year 5	Very Low	Negligible
Recreational receptors				
<i>Public Right of Way – PROW SD156</i>	High	Construction	Medium	Moderate adverse
		Year 1	Medium	Moderate adverse
		Year 5	Medium	Minor adverse
<i>Public Right of Way – PROW SD333</i>	High	Construction	High	Major adverse
		Year 1	High	Major adverse
		Year 5	High	Major adverse
<i>Public Right of Way – PROW SD43</i>	High	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse
<i>Public Right of Way – PROW DR80 and DR120</i>	High	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse
<i>Darent Valley Path</i>	High	Construction	None	No effect
		Year 1	None	No effect

Receptor	Sensitivity	Development Phase	Magnitude of change	Level of Effect
		Year 5	None	No effect
Road users				
<i>Mussenden Lane – short section in the vicinity of the small group of properties adjacent to Horton Wood only</i>	Medium	Construction	Medium	Minor/moderate adverse
		Year 1	Medium	Minor/moderate adverse
		Year 5	Medium	Minor/moderate adverse
<i>School Lane</i>	Medium	Construction	Very Low	Negligible
		Year 1	Very Low	Negligible
		Year 5	Very Low	Negligible
<i>Rabbits Road</i>	Medium	Construction	Very Low	Negligible
		Year 1	Very Low	Negligible
		Year 5	Very Low	Negligible
<i>M20 – short section of the route as it runs to the north of Farningham only – eastbound only</i>	Low	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse
<i>Dartford Road (A225) – short section north-west of Horton Kirby only</i>	Medium	Construction	Low	Minor adverse
		Year 1	Low	Minor adverse
		Year 5	Low	Minor adverse

8. Cumulative Effects

8.1 It is acknowledged that another solar energy development, known as Horton Wood Solar Park, was granted consent in February 2023 (*Sevenoaks Council planning reference: 22/O2599/FUL*) and lies to the north of School Lane, around 500m to the north-east of the proposed development. This section of the assessment therefore considers the potential for cumulative effects in relation to the two schemes.

8.2 The methodology used to assess cumulative effects is in accordance with the principles set out in Chapter 7 of *The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)* (Landscape Institute and the Institute for Environmental Management and Assessment, 2013). It is important to note in particular that at GLVIA para 7.5, states that such an assessment is to be kept 'reasonable and in proportion to the nature of the project under consideration'.

8.3 It is noted that due to their proximity there would be the potential for the two schemes to be seen together in some views from the surrounding landscape resulting in cumulative visual effects and for a greater effect to arise to local character in cumulative terms. However, any such effects would be localised and limited in nature, due to the nature of the local topography and screening by intervening vegetation.

8.4 Indeed, the Planning Officer's Report for the Horton Wood scheme confirmed the following with regard to the limited nature of any landscape and visual effects arising from that scheme:

'The proposed solar park development is relatively low-level itself and the horizontal nature of this type of development, and the fact that it would follow the existing contours of the land, makes it less visually intrusive than most other types of development. The site is well screened with limited views experienced and only within close proximity of the site.'

8.5 With regard to effects on landscape character, the Horton Wood scheme also lies in the same '2b - Eynsford and Horton Kirby Downs' landscape character area (LCA) of the '2 - Downs' landscape character type (LCT), as identified within the *Sevenoaks Landscape Character Assessment, January 2017*. There would therefore be a greater effect on the LCA when both schemes are considered together than would be the case for either scheme in isolation. However, noting that the proposed development was identified to have no more than a moderate to minor effect on the LCA and the Horton Wood scheme was identified as being well screened, it is not considered that any notable cumulative effects on landscape character would arise.



8.6 With regard to effects on visual amenity, the SZTV for the proposed development indicates the potential for visibility in the vicinity of the Horton Wood scheme, however, as discussed previously in the assessment, any potential visibility in that direction would be extremely limited. There may be some localised viewpoints where both schemes could be seen in longer distance views e.g. VP10, however, in these instances the two schemes would be well separated and it is not considered that any notable cumulative effects on visual amenity would arise.

9. Green Belt

Introduction

9.1 This section provides landscape and visual information to inform the consideration of the proposals in relation to the Green Belt. In particular it provides a consideration of the potential for the proposals to impact on the openness of the green belt, as well as addressing the proposals in relation to the five purposes of the green belt, where these relate to landscape and visual matters.

Policy Context

9.2 The National Planning Policy Framework (NPPF) sets out the national planning framework to be used in the determination of planning applications. The NPPF considers Green Belt Matters in Section 13. This confirms at paragraph 137 that:

'The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence'

9.3 There is no definition given to 'openness' in the NPPF. However, further clarification is provided in the 'Green Belt' Guidance, provided online by the UK Government. This sets out at paragraph 001 (Reference ID: 64-001-20190722) that:

'Assessing the impact of a proposal on the openness of the Green Belt, where it is relevant to do so, requires a judgment based on the circumstances of the case. By way of example, the courts have identified a number of matters which may need to be taken into account in making this assessment. These include, but are not limited to:

- *openness is capable of having both spatial and visual aspects – in other words, the visual impact of the proposal may be relevant, as could its volume;*
- *the duration of the development, and its remediability – taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness; and*
- *the degree of activity likely to be generated, such as traffic generation.'*

9.4 Paragraph 138 of the NPPF goes on to note that the Green Belt 'serves five purposes', as follows:

- a) to check the unrestricted sprawl of large built-up areas;
- b) to prevent neighbouring towns merging into one another;
- c) to assist in safeguarding the countryside from encroachment;
- d) to preserve the setting and special character of historic towns; and
- e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

9.5 Paragraph 148 addresses development proposals affecting the Green Belt and states that:

'When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations'

9.6 In turn, Paragraph 151 addresses renewable energy projects located in the Green Belt and states that:

'When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources'

9.7 The matter of the overall consideration of whether 'very special circumstances' exist or not is addressed separately elsewhere in the Planning Statement. This Section however provides information regarding any landscape and visual harm to the Green Belt so that this can be used to inform that wider planning exercise.

Potential for Impact on Openness – Spatial component

9.8 In order to consider the 'spatial' component of openness it is necessary to firstly understand the extent of the existing uses and built form at the site. In this case, the site currently comprises of agricultural fields with no existing built form. On that basis it is therefore acknowledged that with regard to the 'spatial' component of openness there would be an increase in the extent of development within the green belt.

9.9 However, it is important to recognise that the potential for impact to openness should be based on a consideration of both the 'spatial' component and the 'visual' component, which is addressed subsequently below.

Potential for Impact on Openness – Visual Component

9.10 In order to consider the visual component of openness, regard has been had to the findings of the LVA which included for site visits which considered to what extent the proposed development would be visible from the Green Belt.

9.11 A summary of the effects on visual amenity from locations in the green belt, as identified by the LVA, is set out below:

9.12 The proposed layout has sought to retain and augment the existing field boundary vegetation, including the introduction of trees and hedgerows, therefore, minimising harmful visual effects. Due to the undulating nature of the wider surrounding landscape which includes a network of surrounding woodlands, tree lined hedgerows and sporadic built elements the visibility of the proposed development would generally be limited in nature.

9.13 The proposed development has been offset from nearby residential properties and sought to create or strengthen hedgerows along field boundaries, which has resulted in reduced visual effects in the longer-term. Some inevitable adverse effects are likely to remain in the longer term along Public Rights of Way which travel alongside some of the boundaries of the proposals, as well as through the site, at one location on PROW Footpath SD333. However, due to the heavily screened nature of many of the footpaths located in and around the site, the total extent of the visual effects identified for locations along these routes within the green belt would therefore be localised and limited in nature.

Potential for Impact on the Purposes of the Green Belt

9.14 The first three purposes (a – c) are considered relevant to consider from a landscape and visual perspective and are considered below:

a) to check the unrestricted sprawl of large built-up areas

9.15 The proposals have sought to integrate into the existing framework of field boundaries and sensitively offset the proposals to respond to these landscape features within the site. Furthermore, the proposals have sought to reinforce these boundaries, through the strategic

introduction of further planting to reinforce these boundaries for the long term. The proposed development would not therefore facilitate the unrestricted sprawl of the urban environment, but rather contain it within an existing and strengthened network of landscape features.

b) to prevent neighbouring towns merging into one another

- 9.16 It is not considered that the proposed development would make any material contribution to the merging of any of the nearby settlements either physically or perceptually.

c) to assist in safeguarding the countryside from encroachment

- 9.17 It is acknowledged that the proposed development would encroach into the countryside for a temporary period as far as the actual footprint of the new built form is confirmed. However, any impact on the wider countryside would be limited by the sensitive design and the landscape mitigation proposals included with the scheme.

Summary and Conclusion

- 9.18 It is considered with regard to the sensitive design of proposed development and the additional landscape mitigation proposed that the actual perceivable extent of any harm to the Green Belt is relatively limited, especially in future years as the mitigation develops. This harm should therefore be weighed accordingly alongside the benefits of the proposals, as set out in the wider analysis of the 'very special circumstances' presented in the Planning Statement which accompanies the planning application.

10. Summary and Conclusions

Introduction

- 10.1 This Landscape and Visual Assessment (LVA) has been prepared on behalf of RES Limited by Pegasus Group. It relates to the proposed Chimmens Solar Farm, which is located on a site that covers a number of agricultural fields located between Mussenden Lane and the M20 in Sevenoaks, Kent.
- 10.2 It considers the site and its surrounding context in both landscape and visual terms, to assess the potential effects of the development proposals upon landscape features, landscape character and visual amenity.
- 10.3 The site lies to the south of the village of Horton Kirby. Farningham lies to the west, with Hartley and New Ash Green to the east. The proposed development comprises a ground mounted solar farm together with associated equipment and infrastructure.
- 10.4 In order to help mitigate against landscape and visual impacts, landscape proposals have been proposed which provide additional tree and hedgerow planting. Care has been taken to retain existing trees and hedgerows where possible, to retain the character of the local area, to maintain existing visual buffers and to maintain biodiversity value. No development would be located in the adjacent Ancient Woodland or its buffer zone.

Landscape Effects

- 10.5 The site is not covered by any designation at a national, regional, or local level that recognises a specific landscape importance.

Landscape Features

- 10.6 The site itself is similar to that of the wider gently undulating landscape. The proposals would represent a change to the current land use from agricultural fields to an operational solar farm with additional infrastructure. There would be an inevitable effect upon the land use of the site, which would result in Major-Moderate Adverse effects, but care has been taken to retain existing trees and hedgerows, protect the Ancient Woodland and provide further tree and hedgerow planting.



Landscape Character

- 10.7 The site is largely typical of the landscape character of the Eynsford and Horton Kirby Downs, featuring a number of characteristic elements, some of which are recognised as having a specific landscape quality (e.g. the trees, hedgerows and the adjacent ancient woodland).
- 10.8 The landscape character of the site and its surroundings has the potential to be influenced to a degree by the proposed development, albeit that no impacts would arise to the south of the site due to topography and the existing vegetation lining the M20 motorway and also to the east due to topography and screening by Horton Wood. The proposed development's influence upon the surroundings would also be limited by the network of mature hedgerow field boundaries and vegetation such that the actual visibility from much of the surrounding landscape would be far less than that illustrated on the SZTV.
- 10.9 The magnitude of change to the site itself is assessed as high, which when combined with its medium sensitivity, would result in a Moderate to Major Adverse level of effect upon the landscape character during construction and at Year 1. With the introduction of a number of additional enhancements in the form of tree and hedgerow planting along with the creation of new grassland and the management and enhancement of existing hedgerows, there would be some improvements to the physical and perceptual attributes of the site by Year 5 and beyond, but a high magnitude of change and Moderate to Major Adverse would remain.
- 10.10 With regard to effects on the wider Eynsford and Horton Kirby Downs LCA in which the site is located, the proposed development would give rise to a medium to low magnitude of change upon LCA 2b, which would result in a Moderate to Minor Adverse level of effect. Effects on other wider character areas in the surrounding landscape would be no greater than minor.

Landscape Designations

- 10.11 The boundary of the Kent Downs Area of Outstanding Natural Beauty (AONB) lies approximately 0.6km to the south-west of the site at its closest point. However, almost the entirety of the AONB would have no visibility of the proposals, with no more than glimpsed views available as worst case, with intervening vegetation limiting any potential views even further in reality than the very limited areas shown as having potential for visibility on the SZTV. There would be no more than a negligible effect on the AONB and for the vast majority no effect at all.



Visual Effects

- 10.12 The majority of residential properties in the area around the site would have no views of the development, including from the villages of Farningham, South Darenth, Longfield, Hartley, New Ash Green, West Kingsdown and Eynsford. Some moderate adverse effects would arise from parts of Saxon Place and properties at the northern end of Mussenden Lane, but there would be no views from the main part of the village. There would also be a moderate effect on a small group of properties at Fairhavens on Mussenden Lane. At all other properties, there will be no more than minor effects. A major effect would arise for the short section of PROW SD333 which passes through the site itself and a moderate effect for some sections of the nearby PROW SD156. Effects on the surrounding road network would be no more than minor other than a very short section of Mussenden Lane where there would be a minor- moderate effect.

Green Belt

- 10.13 The site is located within the Green Belt. It is considered with regard to the sensitive design of proposed development and the additional landscape mitigation proposed that the actual perceivable extent of any harm to the Green Belt is relatively limited, especially in future years as the mitigation develops. In particular, no impacts would arise to the south of the site due to topography and the existing vegetation lining the M20 motorway and also to the east due to topography and screening by Horton Wood. This limited harm should therefore be weighed accordingly alongside the benefits of the proposals, as set out in the wider analysis of the 'very special circumstances' presented in the Planning Statement which accompanies the planning application.

Conclusion

- 10.14 From a landscape and visual perspective, any notable effects on landscape character or visual receptors as a result of the proposed development would be generally confined to surrounding local areas with visual effects reduced by the retention of the existing vegetation and the proposed mitigation. Overall, and despite the extent of the proposed development, the total extent of the landscape and visual effects would be localised and limited in nature.