

Rampion 2 Wind Farm

Category 6:

Environmental Statement

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Executive Summary

This section summarises the assessment findings for landscape and visual, based on **Chapter 18: Landscape and visual assessment, Volume 2** of the ES (Document Reference: 6.2.18).

How the landscape and visual effects have been assessed

The assessment has been undertaken to accord with the Landscape Institute and IEMA (2013) *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition (GLVIA3), and other best practice guidance listed in **Section 18.2**.

In summary, the landscape and visual effects (and whether they are significant) is determined by an assessment of the nature or 'sensitivity' of each receptor or group of receptors and the nature of the effect or 'magnitude of change' that will result from the onshore elements of the Proposed Development. The evaluation of sensitivity takes account of the value and susceptibility of the receptor to the onshore elements of the Proposed Development. This is combined with an assessment of the magnitude of change which takes account of the size and scale of the proposed change and the geographical extent. The duration and reversibility are stated separately in relation to the assessed effects. By combining assessments of sensitivity and magnitude of change, a level of landscape or visual effect can be evaluated and determined. The resulting level of effect is described in terms of whether it is significant or not significant and the type of effect is described as either direct or indirect; temporary or permanent (reversible); cumulative; and adverse, neutral, or beneficial.

Baseline environment

The LVIA Study Area covers a large, linear area from the West Sussex coast, through West Sussex and the South Downs National Park (SDNP) and crosses the districts of Arun, Horsham and Mid Sussex. For ease of reference each of the onshore elements included in the assessment are listed as follows:

- Onshore substations:
 - ▶ Oakendene; and
 - ▶ Existing National Grid Bolney substation extension (GIS and AIS options).
- Onshore cable corridor, subdivided into three sections:
 - ▶ Part 1: Climping to SDNP;
 - ▶ Part 2: SDNP; and
 - ▶ Part 3: SDNP to Oakendene / Bolney.

During the construction phase, there will be five main construction compounds (two at Oakendene, one at Bolney and a further two along the onshore cable corridor at Climping and Washington). Smaller trenchless crossing construction compounds are also located along the onshore cable corridor at trenchless crossing locations.

The topography of the landscape within the LVIA Study Area varies from being relatively flat in the south towards the coast at 3m Above Ordnance Datum (AOD) rising to 238m AOD at Chanctonbury Hill within the central part of the SDNP before dropping down into the low-lying vales of the Low Weald at around 10m AOD in the northeast near Bolney. The landform rises again towards the High Weald AONB beyond Bolney.

The baseline landscape character has been sourced from Natural England's National Landscape Character Areas and at a county level the West Sussex Landscape character assessment. The landscape assessment has also had regard to the Sussex Historic Landscape Classification (West Sussex County Council (WSSCC) et al., 2010), and the Local distinctiveness study of West Sussex (WSSCC, 2013). Within the SDNP the assessment has had regard to the park authorities landscape character assessment (South Downs National Park Authority (SDNPA), 2020) and key documents including South Downs Viewshed Study Report (2015) and the South Downs National Park Special Qualities report (SDNPA, 2011). A total of 19 Landscape Character Areas (LCA) are included in the assessment (seven within Arun District, five within the SDNP, six within Horsham District, and one within Mid Sussex District). Visual receptors include settlements, transport and recreational routes and recreational / tourist destinations within the LVIA Study Area.

The assessment has been supported by site survey and viewpoint analysis ([Appendix 18.2: Viewpoint analysis, Volume 4](#) of the ES (Document Reference: 6.4.18.2) which is supported by visualisations of the onshore elements of the Proposed Development in [Figures 18.10-76, Volume 3](#) of the ES (Document Reference: 6.3.18). The viewpoint analysis indicates that significant visual effects (during the construction phase) will be limited to within one or two field boundaries with some longer views from within the open downs of the SDNP.

Embedded environmental measures

A range of environmental measures within the [Commitments Register](#) (Document Reference: 7.22) which relate to landscape and visual are embedded as part of the Rampion 2 design to remove or reduce significant environmental effects as far as possible. Examples of these embedded environmental measures include the following:

- reducing as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction (C-1, C-2, C-3, C-6, C-9, C-113 and C-128, [Table 18-25](#)), including location and design of construction/trenchless crossing compounds and construction access provision through iterative design and EIA;
- reduction to the working width of the onshore cable corridor at sensitive locations to protect landscape elements where practical notching vegetation and trenchless technology will be used in some locations such as roads and rivers (C-5, C-20, C-114 and C-115, [Table 18-25](#));
- developing phasing ([Table 18-25](#)) to reduce the amount of time trenches need to be open (C-19), with typically 600m – 1,000m of onshore cable corridor between cable route joint bays/pits, particularly in the SDNP, allowing for quicker backfilling and progressive/early restoration and reinstatement of the landscape with all construction areas re-instated to pre-existing conditions as far as practical (C-7, C-27 and C-128, [Table 18-25](#));
- avoid removing landscape elements, particularly where these are key characteristics and or veteran or mature trees, woodland and hedgerows as far as practical. A

number of these will also have ecology / nature conservation and/or heritage value (C-21, C-115 and C-174, **Table 18-25**);

- ensuring all new planting is established within 5 years and appropriate maintenance and management plans provided for 10 years (C-199, **Table 18-25**); and
- stage specific LEMPs in accordance with the **Outline LEMP** (Document Reference 7.10) to reinstate landscape elements such as trees, woodland and hedgerows, which have been removed as a result of construction, including temporary construction / HDD compounds and temporary construction access (C-196, **Table 18-25**).

Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan has been provided within the **Design and Access Statement (DAS)** (Document Reference 5.8) to mitigate landscape and visual as well as other environmental effects and where possible enhance landscape quality through use of sustainable landscape design techniques involving some earthworks, SUDs, soft / hard landscaping including, but not limited to planting (native trees, hedges and woodland), outline architectural strategy (building colours and materials) lighting details (emergency and security lighting) and perimeter close-boarded fencing.

During the operation and maintenance phase, the onshore cable will be underground and during the decommissioning phase it will be left *in-situ*.

Likely significant effects

Landscape effects Oakendene substation

The onshore substation at Oakendene will have a significant effect on the landscape character within which it is located, namely the J3 Cowfold & Shermanbury Farmlands Local Character Area (LCA) throughout the construction, operation and maintenance and decommissioning phases. These effects are tightly contained by the mature vegetation on Kent Street, A272, Oakendene Manor and Oakendene Industrial Estate and Taintfield Wood which surround the Oakendene substation site.

Visual effects Oakendene substation

During the construction phase, there will be a significant effect on the views experienced by people walking on Public Right of Way (PRoW) 1786 and 1788 north of Taintfield Wood and road users travelling past the site on the A272 and Kent Street, viewing through existing mature roadside vegetation. During the operation and maintenance phase the extent of visual effects will reduce due to the implementation of **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference 5.8) which will mitigate the views from PRoW, the A272 and Kent Street. By Year 10 significant visual effects will be limited to views from PRoW 1786 on high ground to the south of the site near Taintfield Wood. No significant visual effects are identified at the decommissioning stage due to the site being surrounded by mature vegetation as a result of both the existing trees and **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference 5.8).

Landscape effects existing National Grid Bolney substation extension

There will be no significant effects on landscape character resulting from the extension works at the existing National Grid Bolney substation (GIS and AIS options). This is because the National Grid Bolney substation extension site will be contained within an

area already characterised by grid infrastructure and existing vegetation screening will be supplemented by [Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan](#) within the [DAS](#) (Document Reference 5.8).

Visual effects existing National Grid Bolney substation extension

During the construction and decommissioning phases, there will be a significant effect on the views experienced by people walking on PRow 1786 1T/36Bo which passes the site of the temporary construction compound for the existing National Grid Bolney substation extension works.

Landscape effects onshore cable corridor

During the construction phase, the onshore cable corridor will unavoidably and significantly affect the landscape character and associated elements (treelines, woodland, hedges and scrub) within part of 14 LCAs crossed by the onshore cable corridor. The LCAs affected include within Part 1: LCA Nos. 31: Climping Lower Coastal Plain, 34: Middle Arun Valley Floor, 35: Lower Arun Valley Floor, 40: Lyminster-Angmering Coastal Plain, and 41: Black Ditch Rife. Within the SDNP (Part 2) LCA Nos. R1: South Downs Upper Coastal Plain, B4: Angmering and Clapham Wooded Estate Downland, A3: Arun to Adur Open Downs, and J3: Arun to Adur Scarp Foothills. Within Part 3: LCA Nos. D1: Amberley to Steyning Farmlands, F1: Pulborough Chilmington & Thakeham Farmlands, G1: Ashurst & Wiston Wooded Farmlands, O3: Steyning & Henfield Brooks, and J3: Cowfold & Shermanbury Farmlands. The geographical extent of these effects will be linear and limited to within 1-2 field boundaries due to the containing effects of existing vegetation patterns and topography, extending further within the more open South Downs. The duration of these effects will be short term, occurring within the 3.5 year onshore cable corridor construction phase. However, construction work along the onshore cable corridor will be carried out in discrete sections (with typically 600m – 1,000m of onshore cable corridor between cable route joint bays/pits) with progressive backfill and reinstatement commenced in as shortest timeframe as practical (embedded environmental measures C19 and C20, [Section 18.7, Table 18-25](#)).

There will be no significant effects on landscape character during the operation and maintenance phase (the onshore cable will be buried underground), although there will be some residual effects arising from the loss of landscape elements (treelines, woodland, hedges and scrub) during the construction phase. New replacement planting will be undertaken and maintained for 10 Years in accordance with the [Outline Landscape and Ecology Management Plan \(LEMP\)](#) (Document Reference 7.10) to mitigate these effects.

Visual effects onshore cable corridor

There will be no significant effects on the views and visual amenity of settlements during the construction and operation and maintenance phases. Significant visual effects on the views from 21 individual residential properties during the construction phase are assessed in [Appendix 18.5: Residential Visual Amenity Assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.5).

During the construction phase, there will be significant visual effects on the views experienced by people from part of 11 transport routes (A295, Ferry Road, Church Lane, Railway: Littlehampton/Arundel/Ford, A284 Lyminster Road, Poling Street, A283 The Pike, B2116, Kings Lane, Kent Street and Wineham Lane). The views from up to four long-distance recreational routes will be significantly affected. A number of these overlap and include part of the South Downs Way and England Coast Path National Trails, the latter

overlapping with the Arun Way; Sustrans NCR 2 / South Coast Cycle Route and the Sustrans NCR 223 / Downs Link cycle routes. Locally, the views from relatively short sections of approximately 47 PRoWs and two areas of open access land at Barpham Hill and Sullington Hill will be significantly affected. In addition, the views from Littlehampton West Beach (Climping Beach) and three tourist facilities at Climping Camp Site, Climping Caravan Park and Washington Caravan Park.

During the operation and maintenance phase, residual effects arising from the loss of landscape elements (treelines, woodland, hedges and scrub) during the construction phase will affect the views from A283 The Pike, Sustrans NCR 223 / Downs Link and up to 20 PRoW (7 of which are in the SDNP). New replacement planting will be undertaken and maintained for 10 Years in accordance with the **Outline LEMP** (Document Reference 7.10) to mitigate these effects.

Effects on the South Downs National Park

The assessment of the SDNP has drawn from both the landscape and the visual assessment as well as further assessment of the likely effects of the onshore elements of the Proposed Development on the special qualities of the SDNP and its setting and integrity. It is likely that during the construction period there will be a significant effect on two of the seven special qualities of the SDNP. These include the “*Diverse, inspirational landscapes and breathtaking views*”, and “*Tranquil and unspoilt places*”.

There would be no effect on the South Downs International Dark Sky Reserve or ‘dark skies’ within the SDNP due to the environmental measures within the **Commitments Register** (Document Reference: 7.22) (C-22, C-66, and C-200)

In some cases, affecting long range 360° views from hill tops, the effects will be cumulative with other whole Proposed Development effects, namely the offshore wind turbines as assessed in **Chapter 15: Seascape, landscape and visual impact assessment, Volume 2** of the ES (Document Reference: 6.2.15).

Because of the short duration of these residual effects, occurring in discrete sections and their largely reversible nature (the onshore cable corridor will be reinstated and vegetation re-planted) the integrity of this part of the SDNP will not be significantly affected by the landscape and visual effects during the construction phase.

During the operation and maintenance phase, the effects on the SDNP will reduce and considering the replacement planting and its maintenance for 10 years as set out in the **Outline LEMP** (Document Reference: 7.10); there will be no remaining significant effects resulting from the onshore elements of the Proposed Development on the SDNP and its special qualities, setting or integrity.

Cumulative effects

The cumulative effects assessment identifies other developments where visual and landscape effects may be simultaneously or sequentially experienced during the construction phase. Potential developments where cumulative effects may be experienced include residential and mixed-use development near Climping and along the urban fringes of Littlehampton (ID 13, 14, 62, and 63), highway development such as the Lyminster Bypass (ID 59) and Arundel Bypass (ID 1) and energy development (ID 50, 51, 52, 54, 56 and 57) near Bolney.

Inter-related effects

No significant inter-related effects of greater significance compared to the effects considered alone were identified for landscape and visual receptors during the construction, operation and maintenance, and decommissioning phases of the Proposed Development.

Transboundary effects

No significant transboundary effects have been identified in relation to the Proposed Development on landscape and visual receptors during the construction, operation and maintenance, and decommissioning phases.

18. Landscape and visual impact

18.1 Introduction

18.1.1 This chapter of the Environmental Statement (ES) presents the results of the assessment of the likely significant effects of Rampion 2 with respect to the onshore landscape resource and visual amenity. The landscape and visual impact assessment (LVIA) assesses the landscape and visual effects of the onshore elements of the Proposed Development whilst **Chapter 15: Seascape, landscape and visual, Volume 2** of the ES (Document Reference: 6.2.15) assesses the seascape, landscape and visual effects of the offshore elements of the Proposed Development. It should be read in conjunction with the project description provided in **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4) and the relevant parts of the following chapters and appendices:

- **Chapter 15: Seascape, landscape and visual, Volume 2** of the ES (Document Reference: 6.2.15) due to the close association between the LVIA and Seascape, landscape and visual impact assessment (SLVIA), and the inter-project effects of the onshore and offshore elements of the Proposed Development;
- **Chapter 17: Socio-economics, Volume 2** of the ES (Document Reference: 6.2.17) due to the visual effects on recreational receptors and visitor attractions;
- **Chapter 20: Soils and agriculture, Volume 2** of the ES (Document Reference: 6.2.20) due to the effects visible during construction from preparation site clearance, earthworks etc.;
- **Chapter 21: Noise and vibration, Volume 2** of the ES (Document Reference: 6.2.21) due to the inter-relationships between visual effects and noise on several visual receptors;
- **Chapter 22: Terrestrial ecology and nature conservation, Volume 2** of the ES (Document Reference: 6.2.22) due to the inter-relationships between the landscape habitats and effects on landscape elements (including trees hedges and woodland) and visual effects on nature reserves which may also be visitor attractions;
- **Chapter 23: Transport, Volume 2** of the ES (Document Reference: 6.2.23) due to the close association on recreational routes including Public Rights of Way (PRoW); and
- **Chapter 25: Historic environment, Volume 2** of the ES (Document Reference: 6.2.25) due to the inter-relationships between the landscape and visual effects on some heritage features which may also be landmarks and visitor attractions.

18.1.2 This chapter should be read in conjunction with the maps and visualisations presented on **Figures 18.1 to 18.88, Volume 3** of the ES (Document Reference: 6.3.18) and is supported by the following appendices:

- **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1);
- **Appendix 18.2: Viewpoint Analysis, Volume 4** of the ES (Document Reference: 6.4.18.2);
- **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3);
- **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4);
- **Appendix 18.5: Residential Visual Amenity Assessment, Volume 4** of the ES (Document Reference: 6.4.18.5); and
- **Appendix 18.6: Viewpoint Directory, Volume 4** of the ES (Document Reference: 6.4.18.6).

18.1.3 This chapter contains the following section and describes:

- **Section 18.2: Relevant legislation, planning policy, and other documentation:** describes the legislation, planning policy and other documentation that has informed the assessment;
- **Section 18.3: Consultation and engagement:** describes the outcome of consultation and engagement that has been undertaken to date, including how matters relating to the LVIA within the Statutory Consultation;
- **Section 18.4: Scope of the assessment:** describes the scope of the assessment for the LVIA;
- **Section 18.5: Methodology for baseline data gathering:** describes the methods used for the baseline data gathering;
- **Section 18.6: Baseline conditions:** describes the overall baseline;
- **Section 18.7: Basis for ES assessment:** describes embedded environmental measures relevant to the LVIA and the relevant maximum design scenario;
- **Section 18.8: Methodology for ES assessment:** describes the assessment methods used for the ES;
- **Section 18.9 - 18.13: Assessment of effects** and **Section 18.14: Assessment of cumulative effects:** describes the assessment of landscape and visual effects;
- **Section 18.15: Transboundary effects:** consideration of transboundary effects;
- **Section 18.16: Inter-related effects:** describes inter-related effects;
- **Section 18.17: Summary of residual effects:** provides a summary of residual landscape and visual effects;
- **Section 18.18: Glossary of terms and abbreviations:** provides a glossary of terms and abbreviations; and
- **Section 18.19: References:** provides a references list.

18.2 Relevant legislation, planning policy and other documentation

Introduction

18.2.1 This section identifies the legislation, policy and other documentation that has informed the assessment of effects with respect to the LVIA. Further information on policies relevant to the EIA and their status is provided in [Chapter 2: Policy and legislative context, Volume 2](#) of the ES (Document Reference: 6.2.2).

Legislation and national planning policy

18.2.2 **Table 18-1** lists the legislation relevant to the assessment of the effects on landscape and visual receptors.

European Landscape Convention (ELC)

18.2.3 The ELC is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors*" (ELC, 2000. Art.1(a)). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.

18.2.4 The ELC is binding in the UK. As a signatory, the UK Government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:

- to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
- to establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;
- to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned above; and
- to integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.

18.2.5 Landscape policy in the UK is already closely aligned with the ELC, and before UK ratification a Regulatory Impact Assessment had demonstrated that existing procedures and practice (through the work over many years of Government agencies, Local Government and Non-Governmental Organisations (NGOs) such as the National Trust) are compliant with its formal requirements. Given the UK's

adoption of the ELC and its aims, the ELC gives an appropriate basis for the importance placed on the UK landscape.

Table 18-1 Legislation relevant to landscape and visual impact

Legislation description	Relevance to assessment
National Parks and Access to the Countryside Act 1949, as amended	
National Parks and Areas of Outstanding Natural Beauty (AONB), which are nationally designated landscapes, are designated under the provisions of the National Parks and Access to the Countryside Act (1949).	The effects on the Special Landscape Qualities of the South Downs National Park (SDNP) and High Weald AONB and their setting are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.
Countryside and Rights of Way Act 2000, as amended	
Section 85 of the Countryside and Rights of Way Act (2000) provides that in exercising or performing any functions in relation to, or so as to affect, land in an AONB, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of these areas.	The High Weald AONB is located approximately 560m to the north of the proposed DCO Order Limits (Figure 18.6a, Volume 3 of the ES (Document Reference: 6.3.18)). The effects on the AONB and its Special Landscape Qualities are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.

18.2.6 **Table 18-2** lists the national planning policy relevant to the assessment of the effects on landscape and visual receptors.

Table 18-2 National planning policy relevant to the LVIA

Policy description	Relevance to assessment
Overarching National Policy Statement (NPS) for Energy (EN-1) (Department of Energy and Climate Change (DECC), (2011a)	
Paragraph 5.9.5 of EN-1 advises that the applicant should carry out a landscape and visual assessment and makes reference to the following documents:	<i>'The Guidelines for Landscape and Visual Impact Assessment'</i> (GLVIA) (2002, 2nd edition) has been superseded by GLVIA Version 3 (2013).
Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition):	<i>Landscape Character Assessment – Guidance for England and Scotland</i> (2002) has been superseded by Natural England's

Policy description	Relevance to assessment
<p><i>Guidelines for Landscape and Visual Impact Assessment</i>, and</p> <p>Land Use Consultants (2002): <i>Landscape Character Assessment – Guidance for England and Scotland</i>.</p>	<p>'<i>An Approach to Landscape Character Assessment</i>' (2014).</p> <p>This LVIA has been prepared following the updated versions of these documents which are referred to in the LVIA Methodology in Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1).</p>
<p>Paragraph 5.9.5 of EN-1 states “<i>The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant’s assessment should also take account of any relevant policies based on these assessments in local development documents in England.</i>”</p>	<p>Reference to landscape character assessment studies and local development documents to inform the assessment is set out in Section 18.5.</p>
<p>Paragraph 5.9.6 of EN-1 states “<i>The applicant’s assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.</i>”</p>	<p>The effect of the onshore elements of the Proposed Development on landscape components (elements) and landscape character during the construction, and operation and maintenance phases are assessed in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>
<p>Paragraph 5.9.7 of EN-1 states “<i>The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity.</i>”</p>	<p>The visual effects of the onshore elements of the Proposed Development on surrounding receptors including settlements, transport routes, recreational routes and visitor attractions during the construction, and operation and maintenance phases are assessed in Sections 18.9 to 18.13, and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>Paragraph 5.9.8 of EN-1 states “<i>Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its</i></p>	<p>The quality, value and capacity of the landscape to accommodate change are considerations of the landscape assessment. The design of the onshore</p>

Policy description	Relevance to assessment
<p><i>capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.”</i></p> <p>Paragraphs 5.9.12 and 5.9.13 relate to considerations for development outside nationally designated landscapes, and state “<i>The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.</i>” ... and paragraph 5.9.13 advises “<i>The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.</i>”</p> <p>Paragraphs 5.9.10-11 relate to considerations for development within nationally designated landscapes: Paragraph 5.9.10 states that: “<i>The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: [...] any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.</i>” Paragraph 5.9.11 indicates that: “<i>The IPC [now the Secretary of State] should ensure that any projects consented in these</i></p>	<p>elements of the Proposed Development has considered the potential effect on the landscape and includes embedded environmental measures presented in Section 18.7 which will be delivered in order to minimise harm by mitigation of landscape effects as reported in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p> <p>Landscape effects on the SDNP, its setting and its Special Landscape Qualities (SLQ) are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter. Indirect landscape effects on the High Weald AONB, its setting and its Special Landscape Qualities are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p>

Policy description	Relevance to assessment
<p><i>designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary.”</i></p>	
<p>Paragraph 5.9.14 of EN-1 states “<i>Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.</i>”</p>	<p>There are no locally designated landscapes within the LVIA Study Area.</p>
<p>Paragraph 5.9.16 of EN-1 states “<i>In reaching a judgment, the IPC [now the Secretary of State] should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.</i>”</p>	<p>The LVIA has reported on the nature of effects in Sections 18.9 to 18.13, as set out in the methodology in Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1).</p>
<p>Paragraph 5.9.17 of EN-1 states that in reaching a judgement “<i>The IPC [now the Secretary of State] should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.</i>”</p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded environmental measures are presented in Section 18.7.</p>
<p>Paragraph 5.9.19 of EN-1 states “<i>It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development.</i>”</p>	<p>Rampion 1, East Anglia ONE, Greater Gabbard and Triton Knoll are examples of existing permitted onshore infrastructure which may have comparable landscape and visual effects.</p>

Policy description	Relevance to assessment
<p>Paragraph 5.9.22 of EN-1 states “<i>Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.</i>”</p>	<p>Mitigation through detailed landscape proposals will be a consideration in terms of the mitigation of landscape and visual effects. Embedded environmental measures are presented in Section 18.7.</p>
<p>EN-3 NPS for Renewable Energy (DECC, 2011b)</p>	
<p>Paragraph 2.4.2 of EN-3 NPS states “<i>Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity...</i>”</p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded environmental measures are presented in Section 18.7.</p>
<p>EN-5 NPS for Electricity Networks (DECC, 2011c)</p>	
<p>Paragraph 2.8.2 of EN-5 NPS states “<i>New substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts. Cumulative landscape and visual impacts can arise where new overhead lines are required along with other related developments such as substations, wind farms and/or other new sources of power generation.</i>”</p>	<p>The potential landscape and visual effects are assessed in Sections 18.9 to 18.13, Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021)</p>	
<p>Paragraph 126 states that “<i>The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development</i></p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded environmental measures are presented in</p>

Policy description	Relevance to assessment
<p><i>acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process.”</i></p> <p>Paragraph 130 of the NPPF states that developments should be “<i>visually attractive</i>” and “<i>sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change.</i>”</p> <p>Paragraph 174 of the NPPF states that planning decisions “<i>should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes...[and] recognising the intrinsic character and beauty of the countryside...</i>”</p> <p>Paragraph 176 states that “<i>Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.</i>”</p>	<p>Section 18.7.The design process is also set out in the Design and Access Statement (DAS) (Document Reference 5.8).</p> <p>This chapter assesses effects in relation to valued landscapes including nationally designated landscapes, such as the SDNP and High Weald AONB, landscape character areas, and views and visual receptors as set out principally in Sections 18.9 to 18.13, and in more detail in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4)</p> <p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7.</p> <p>Landscape effects on the SDNP and the High Weald AONB, their setting and SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.4) and summarised in Sections 18.9 to 18.13 of this chapter.</p>

18.2.7 The UK Government published draft NPS EN1-EN5 (Department for Energy Security and Net Zero (DESNZ), 2023a; DESNZ, 2023b)) for consultation in September 2021 and subsequently in March 2023 with further amendments. The

2011 NPSs remain in force until the review is approved (designated) and under proposed transitional arrangements the 2023 amendments will only have effect in relation to applications for development consent accepted for examination after designation. However, the draft emerging NPSs can potentially be relevant planning considerations. Therefore, Rampion 2 has kept abreast of the potential changes to the energy NPSs and incorporated any updates where required in the ES.

- 18.2.8 The following emerging national planning policies are relevant to the assessment of the effects on LVIA receptors:
- *Draft Overarching National Policy Statement for Energy (EN-1)*, (DESNZ, 2023a); and
 - *Draft National Policy Statement for Electricity Networks Infrastructure (EN-5)*, (DESNZ, 2023b).
- 18.2.9 **Table 18-3** lists the emerging national planning policy considerations relevant to the assessment of the effects on landscape and visual receptors.

Table 18-3 Emerging national planning policy relevant to the LVIA

Policy description	Relevance to assessment
<p>Draft Overarching National Policy Statement for Energy (EN-1), March 2023 (DESNZ, 2023a)</p> <p>Paragraph 3.3.59 states that <i>‘Government has concluded that there is a critical national priority (CNP) for the provision of new offshore wind infrastructure (and supporting onshore and offshore network infrastructure)’</i> and paragraph 3.3.60 goes on to state that <i>‘the urgent need for CNP infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP infrastructure and it should be progressed as quickly as possible.’</i></p>	<p>The project has applied the mitigation hierarchy effectively through the embedded measures incorporated within the project design (Section 18.7 Table 18-25). Likely significant effects on landscape and visual receptors have been reduced or mitigated following the mitigation hierarchy, including embedded design measures to reduce harms, such as on the special qualities of the SDNP and its views.</p>
<p>Paragraph 4.2.11 advises that <i>‘In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal</i></p>	<p>Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4) of the ES sets out the details of the project and which aspects are defined in detail. Section 18.4 sets out the maximum design parameters that have</p>

Policy description	Relevance to assessment
<p><i>have yet to be finalised, and the reasons why this is the case.</i></p> <p>At paragraph 4.2.12 it is stated that, where this is the case, the likely worst case environmental effects should be set out and assessed.</p> <p>In relation to the topic of ‘Criteria for Good Design’ for Energy Infrastructure Paragraph 4.6.1 advises that <i>‘The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object - be it a building or other type of infrastructure - including fitness for purpose and sustainability, is equally important’</i> and in Paragraph 4.6.2, <i>‘Applying “good design” to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area’.</i></p> <p>Paragraph 4.6.34 continues on the topic of good design and notes that this is a means by which many policy objectives in the NPS can be met. This may include siting and use of appropriate technologies that can help mitigate adverse impacts.</p>	<p>been defined to ensure that the worst-case landscape and visual effects are assessed.</p> <p>The Design and Access Statement (DAS) (Document Reference 5.8) sets out how Rampion 2 responds to ‘good design’ in respect of the onshore elements of the Proposed Development and how these will affect landscape and visual receptors through the provision of Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference 5.8). Opportunities for enhancement of the quality of an area through the ‘Good Design’ of the onshore elements of the Proposed Development are limited due to the technical and economic requirements associated with producing renewable energy as well as other environmental factors.</p>
<p>Paragraph 4.6.5 advises that Applicants need to consider the importance of ‘good design’ criteria and demonstrate this in their applications stating that <i>“a project board level design champion could be appointed, and a representative design</i></p>	<p>Flexibility in the design of Rampion 2 is required, as described in Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4), with assessment undertaken on the parameters as set out in Section 18.7 of this chapter.</p>

Policy description	Relevance to assessment
<p><i>panel used to maximise the value provided by the infrastructure. Design principles* should be established from the outset of the project to guide the development from conception to operation.”</i></p> <p><i>*Design principles should take into account any national guidance on infrastructure design, this could include for example the Design Principles for National Infrastructure published by the National Infrastructure Commission, the National Design Guide and National Model Design Code, as well as any local design policies and standards. https://nic.org.uk/studies-reports/design-principles-for-national-infrastructure/</i></p>	<p>This is recognised by NPS EN-1 Paragraph 4.2.11 and NPS EN-3 Paragraphs 3.6.1 to 3.6.3 (Department of Energy and Climate Change, 2011a; 2011b).</p>
<p>Paragraph 4.6.7 sets out that the applicants should be able to demonstrate ‘<i>how the design process was conducted and how the proposed design evolved</i>’ and ‘<i>where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected</i>’. Paragraph 4.6.12 goes on to identify that the SoS ‘<i>should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process.</i>’ It is also noted that ‘<i>Assessment of impacts must be for the stated design life of the scheme rather than a shorter time period.</i>’ (4.6.12).</p>	<p>The evolution of the project design is set out in Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3). The duration of the impacts is assessed in Section 18.11 to 18.13 Table 18-39 of this Chapter.</p>
<p>In relation to Good Design paragraph 4.6.11 advises that ‘<i>The Secretary of State should be satisfied that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the</i></p>	<p>Section 18.7 sets out the embedded environmental measures which have been developed to address landscape and visual effects including ‘aesthetics’/visual amenity.</p>

Policy description	Relevance to assessment
<p><i>landscape or seascape) as far as possible’.</i></p> <p>Paragraph 5.10.7 states that <i>‘National Parks, the Broads and AONBs have been confirmed by the government as having the highest status of protection in relation to landscape and natural beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the Secretary of State should have regard to in their decisions’.</i> Paragraph 5.10.8 advises that the <i>‘The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid harming the purposes of designation or to minimise adverse impacts on designated areas, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints’.</i></p>	<p>The potential for Rampion 2 to impact upon the nationally designated areas has been considered in Section 18.9 to 18.13. Regard has been paid to the purpose and special qualities of these nationally designated landscapes following stakeholder comments through the embedded environmental measures applied to the project as described in Section 18.7.</p>
<p>NPS EN-1 reiterates the likelihood of such infrastructure having visual effects, noting at Paragraph 5.10.12 that <i>‘All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites’.</i> Paragraph 5.10.13 goes on to state <i>‘The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project’.</i></p>	<p>The impacts on visual receptors are assessed in Sections 18.9 to 18.13. The benefits (including need) of the project are set out in Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3).</p>
<p>Paragraph 5.10.15 of the draft EN-1 advises that <i>“the applicant should carry out a landscape and visual assessment, and report it in the ES, including cumulative effects”</i> in accordance with a number of guidance documents.</p>	<p>The LVIA has been prepared in accordance with best practice guidance which are referred to in the LVIA Methodology in Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1).</p>

Policy description	Relevance to assessment
<p>Paragraph 5.10.16 of the draft EN-1 states <i>“The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant’s assessment should also take account of any relevant policies based on these assessments in local development documents in England....”</i></p>	<p>References to landscape character assessment studies and local development documents to inform the assessment are set out in Section 18.5.</p>
<p>Paragraph 5.10.19 of the draft EN-1 states <i>“The assessment should include the effects on landscape components and character during construction and operation. For projects which may affect a National Park, The Broads or an Areas of Outstanding Natural Beauty the assessment should include effects on the natural beauty and special qualities of these areas.”</i></p>	<p>The effect of the onshore elements of the Proposed Development on landscape components (elements) and landscape character during the construction, and operation and maintenance phases are assessed in Sections 18.9 to 18.13, and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>
<p>Paragraph 5.10.20 of the draft EN-1 states <i>“The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.”</i></p>	<p>The visual effects of the onshore elements of the Proposed Development on surrounding receptors including settlements, transport routes, recreational routes and visitor attractions during the construction, and operation and maintenance phases are assessed in Sections 18.9 to 18.13, and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>Paragraph 5.10.21 of the draft EN-1 states <i>“The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views, will be minimised.”</i></p>	<p>Section 18.7 sets out embedded environmental measures to minimise noise and light pollution from construction and operational activities on residential amenity and on sensitive locations. The effect of the onshore elements of the Proposed Development on views from residential properties and other visual receptors during the construction, and operation and maintenance phases are assessed in Sections 18.9 to 18.13, and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.4) Effects on noise are assessed in Chapter</p>

Policy description	Relevance to assessment
<p>Paragraph 5.10.4 - 5.10.6 of the draft EN-1 states <i>“Landscape effects arise not only from the sensitivity of the landscape but also the nature and magnitude of change proposed by the development, whose specific siting and design make the assessment a case-by-case judgement. Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.”</i></p>	<p>21: Noise and vibration, Volume 2 of the ES (Document Reference: 6.2.21).</p> <p>The design of the onshore elements of the Proposed Development has considered the potential effect on the landscape and includes embedded environmental measures presented in Section 18.7 which will be implemented in order to provide mitigation of landscape and visual effects and cumulative effects as reported in Sections 18.9 to 18.13, and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>
<p>Paragraph 5.10.8 relates to considerations for development outside nationally designated landscapes, and state <i>“The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid harming the purposes of designation or to minimise adverse impacts on designated areas, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.”</i> ... and paragraph 5.10.33 advises <i>“The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.”</i></p>	<p>Landscape effects on the SDNP, its setting and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13.</p> <p>Landscape on effects on the High Weald AONB, its setting and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13.</p>
<p>Paragraphs 5.10.31-32 relate to considerations for development within nationally designated landscapes: Paragraph 5.10.31 states that: <i>“The conservation of the natural beauty of the</i></p>	

Policy description	Relevance to assessment
<p><i>landscape and countryside should be given substantial weight by the Secretary of State in deciding on applications for development consent in these areas. Such development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: [...] any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.”</i></p> <p>Paragraph 5.10.32 indicates that: “<i>The Secretary of State should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary.</i>”</p>	
<p>Paragraph 5.10.11 of the draft EN-1 states “<i>Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England or a local development plan in Wales has policies based on landscape or waterscape character assessment, these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.</i>”</p>	<p>There are no locally designated landscapes within the LVIA Study Area.</p>
<p>Paragraphs 5.10.34 - 35 of the draft EN-1 states “<i>The scale of energy projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project. In reaching a judgment, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.</i>”</p>	<p>The LVIA has reported on the nature of effects in Sections 18.9 to 18.13, as set out in the methodology in Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1).</p>

Policy description	Relevance to assessment
<p>Paragraph 5.10.36 of the draft EN-1 states that in reaching a judgement <i>“The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.”</i></p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3) that has sought to avoid sensitive features in the landscape wherever possible. Embedded environmental measures are presented in Section 18.7.</p>
<p>Paragraph 5.10.23 states that <i>“Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.”</i></p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3) that has sought to avoid sensitive features in the landscape wherever possible. Embedded measures are presented in Section 18.7.</p> <p>Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline Landscape and Ecological Management Plan (LEMP) (Document Reference: 7.10)</p>
<p>Paragraph 5.10.24 of the draft EN-1 states <i>“In considering visual effects it may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the Secretary of State in judging the weight they should give to the assessed visual impacts of the proposed development.”</i></p>	<p>Rampion 1, East Anglia ONE, Greater Gabbard and Triton Knoll are examples of existing permitted onshore infrastructure which may have comparable landscape and visual effects.</p>
<p>Paragraph 5.10.26 of the draft EN-1 states <i>“Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours</i></p>	<p>Landscape and visual effects have been minimised through site selection and design as demonstrated by the embedded environmental measures set out in Section 18.7 and Appendix C National</p>

Policy description	Relevance to assessment
<p><i>and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.”</i></p>	<p>Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) and the Outline LEMP (Document Reference: 7.10).</p>
<p>Paragraph 5.10.27 of the draft EN-1 states <i>“Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines may mitigate the impact when viewed from a more distant vista.”</i></p>	<p>No off-site planting is proposed as part of the mitigation, although additional planting placed within and outside the proposed DCO Order Limits is expected to be achieved through the commitment to Biodiversity Net Gain (Appendix 22.15: Biodiversity Net Gain Information, Volume 4 of the ES (Document Reference: 6.4.22.15)).</p>
<p>Draft National Policy Statement for Electricity Networks Infrastructure (EN-5), March 2023</p>	
<p>Paragraphs 2.9.9-10 of the draft EN-5 NPS states <i>“New substations, sealing end compounds (including terminal towers), and other above-ground installations that serve as connection, switching, and voltage transformation points on the electricity network may also give rise to adverse landscape and visual impacts. Cumulative adverse landscape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, wind farms, and/or other new sources of generation.”</i></p>	<p>The potential landscape and visual effects are assessed in Sections 18.9 to 18.13, Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>Paragraph 2.9.11 - 2.9.12 of the draft EN-5 NPS states: <i>“Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for overhead lines. However, in nationally designated landscapes (for instance, National Parks, The Broads and Areas of Outstanding</i></p>	<p>None of the onshore elements of the Proposed Development include overhead lines. Mitigation (including within the SDNP) through detailed landscape proposals will be a consideration in terms of the mitigation of landscape and visual effects. Embedded environmental measures are presented in Section 18.7. The potential residual landscape and visual effects are assessed in Sections</p>

Policy description	Relevance to assessment
<i>Natural Beauty) even residual impacts may well make an overhead line proposal unacceptable in planning terms.”</i>	18.9 to 18.13, Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).

Local planning policy

- 18.2.10 **Table 18-4** lists the local planning policy relevant to the assessment of the potential effects on landscape and visual receptors.
- 18.2.11 The key local planning policies from the following host local authorities within the LVIA study area have been considered:
- South Downs National Park Authority (SDNPA);
 - Arun District Council;
 - Horsham District Council; and
 - Mid-Sussex District Council.

Table 18-4 Key local planning policies relevant to the LVIA

Policy description	Relevance to assessment
<p>South Downs Local Plan 2014-2033 (SDNPA, 2019)</p> <p>Core Policy SD1: Sustainable Development states <i>“1. When considering development proposals that accord with relevant policies in this Local Plan and with National Park purposes, the Authority will take a positive approach that reflects the presumption in favour of sustainable development. It will work with applicants to find solutions to ensure that those development proposals can be approved without delay, unless material planning considerations indicate otherwise.</i></p> <p><i>2. The National Park purposes are</i></p> <ul style="list-style-type: none"> <i>i) to conserve and enhance the natural beauty, wildlife and cultural heritage of the area; and</i> <i>ii) to promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public.</i> <p><i>Where it appears that there is a conflict between the National Park purposes, greater weight will be attached to the first of those purposes. In pursuit of the purposes, the National Park Authority will pay due regard to its duty to seek to foster the economic and social wellbeing of the local communities within the National Park.</i></p> <p><i>3. When determining any planning application, the Authority will consider the cumulative impacts of development.</i></p> <p><i>4. Planning permission will be refused where development proposals fail to conserve the landscape, natural beauty, wildlife and cultural heritage of the National Park unless, exceptionally:</i></p> <ul style="list-style-type: none"> <i>a) The benefits of the proposals demonstrably outweigh the great weight to be attached to those interests; and</i> <i>b) There is substantial compliance with other relevant policies in the development plan.”</i> 	<p>Landscape effects on the SDNP, its setting and its SLQs are assessed in Appendix 18.3: Landscape Assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13.</p>
<p>Core Policy SD3: Major Development states <i>“1. In determining what constitutes major development the National Park Authority will consider whether the development, including temporary events should they be deemed to constitute development, by reason of its scale, character or nature, has the potential to have a significant adverse impact on the</i></p>	<p>Landscape effects including any potential significant effects on the SDNP, its setting and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.</p>

Policy description	Relevance to assessment
<p><i>natural beauty, wildlife or cultural heritage of, or recreational opportunities provided by, the National Park. The potential for significant adverse impact on the National Park will include the consideration of both the impact of cumulative development and the individual characteristics of each proposal and its context.</i></p> <p><i>2. Planning permission will be refused for major developments in the National Park except in exceptional circumstances, and where it can be demonstrated they are in the public interest. Consideration of such applications should include an assessment of:</i></p> <p><i>[...]</i></p> <p><i>c) Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated....”</i></p>	<p>18.3) and summarised in Sections 18.9 to 18.13.</p> <p>The cumulative effects assessment is presented in Section 18.14.</p> <p>Visual effects on recreational activities (recreational routes and visitor attractions) are assessed in Sections 18.9 to 18.13 and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>Strategic Policy SD4: Landscape Character states “1. Development proposals will only be permitted where they conserve and enhance landscape character by demonstrating that:</p> <ul style="list-style-type: none"> <i>a) They are informed by landscape character, reflecting the context and type of landscape in which the development is located;</i> <i>b) The design, layout and scale of proposals conserve and enhance existing landscape and seascape character features which contribute to the distinctive character, pattern and evolution of the landscape;</i> <i>c) They will safeguard the experiential and amenity qualities of the landscape; and</i> <i>d) Where planting is considered appropriate, it is consistent with local character, enhances biodiversity, contributes to the delivery of GI and uses native species, unless there are appropriate and justified reasons to select non-native species.</i> <p><i>2. Where development proposals are within designed landscapes, or the setting of designed landscapes, (including historic parkscapes and those on the Historic England Register of Historic Parks and Gardens) they should be based on a demonstrable understanding of the design principles of the landscape and should be complementary to it.</i></p> <p><i>3. The settlement pattern and individual identity of settlements and the integrity of predominantly open</i></p>	<p>Landscape character effects on the SDNP (SDNPA, <i>South Downs Landscape Character Assessment 2020</i>) is assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7. Reference has also been made to the SDNP interactive maps covering landscape character, dark skies and tranquillity.</p>

Policy description	Relevance to assessment
<p><i>and undeveloped land between settlements will not be undermined.</i></p> <p><i>4. Green and blue corridors will be safeguarded. Development proposals should identify and take opportunities to create and connect green and blue corridors.</i></p> <p><i>5. The restoration of landscapes where features have been lost or degraded will be supported where it contributes positively to landscape character.”</i></p> <p>Strategic Policy SD5: Design states <i>“1. Development proposals will only be permitted where they adopt a landscape led approach and respect the local character, through sensitive and high quality design that makes a positive contribution to the overall character and appearance of the area. The following design principles should be adopted as appropriate:</i></p> <p><i>a) Integrate with, respect and sympathetically complement the landscape character by ensuring development proposals are demonstrably informed by an assessment of the landscape context;</i></p> <p><i>b) Achieve effective and high quality routes for people and wildlife, taking opportunities to connect GI;</i></p> <p><i>c) Contribute to local distinctiveness and sense of place through its relationship to adjoining buildings, spaces and landscape features, including historic settlement pattern;</i></p> <p><i>[...]</i></p> <p><i>e) Incorporate hard and soft landscape treatment which takes opportunities to connect to the wider landscape, enhances GI, and is consistent with local character</i></p> <p><i>.....’</i></p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to broadly adopt these design principles including avoiding sensitive features in the landscape wherever possible.</p> <p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7.</p> <p>Reference has been (where appropriate) made to SDNP design guides such as Hamilton-Baillie Associates Ltd (SDNPA, 2015a) “<i>Roads in the South Downs</i>”.</p>
<p>Strategic Policy SD6: Safeguarding Views states <i>“1. Development proposals will only be permitted where they preserve the visual integrity, identity and scenic quality of the National Park, in particular by conserving and enhancing key views and views of key landmarks within the National Park.</i></p> <p><i>2. Development proposals will be permitted that conserve and enhance the following view types and patterns identified in the Viewshed Characterisation & Analysis Study:</i></p> <p><i>a) Landmark views to and from viewpoints and tourism and recreational destinations;</i></p>	<p>Visual effects on the SDNP’s key views / key landmarks within and just beyond the LVIA Study Area and agreed through consultation are assessed in Appendix 18.2: Viewpoint analysis, Volume 4 of the ES (Document Reference: 6.4.18.2).</p> <p>Visual effects on recreational activities within the SDNP (recreational routes – South</p>

Policy description	Relevance to assessment
<p>b) Views from publicly accessible areas which are within, to and from settlements which contribute to the viewers' enjoyment of the National Park;</p> <p>c) Views from public rights of way, open access land and other publicly accessible areas; and</p> <p>d) Views which include or otherwise relate to specific features relevant to the National Park and its special qualities, such as key landmarks including those identified in Appendix 2 of the Viewshed Characterisation & Analysis Study, heritage assets (either in view or the view from) and biodiversity features.</p> <p>3. Development proposals will be permitted provided they conserve and enhance sequential views, and do not result in adverse cumulative impacts within views."</p>	<p>Downs Way, other public rights of way (PRoWs), Open Access Land, and recreational destinations) are assessed in Sections 18.9 to 18.13, and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p> <p>Sequential visibility on the South Downs Way has been assessed in Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4) and illustrated on Figure 18.66a-c, Volume 3 of the ES (Document Reference: 6.3.18).</p>
<p>Strategic Policy SD7: Relative Tranquillity states: "Development proposals will only be permitted where they conserve and enhance relative tranquillity and should consider the following impacts:</p> <p>a) Direct impacts that the proposals are likely to cause by changes in the visual and aural environment in the immediate vicinity of the proposals;</p> <p>b) Indirect impacts that may be caused within the National Park that are remote from the location of the proposals themselves such as vehicular movements; and</p> <p>c) Experience of users of the PRoW network and other publicly accessible locations..."</p>	<p>Effects on tranquillity are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>
<p>Development Management Policy SD8: Dark Night Skies states: "The SDNP is also an International Dark Sky Reserve and the policy sets out a hierarchy for new development. Wherever possible new development will be required to avoid installing lighting. If new lighting is unavoidable steps must be taken to avoid its impacts on our dark night skies by making sure that it's properly designed, taking into consideration direction of lighting and number of lumens emitted. If that is not possible, adverse impacts of lighting will be required to be mitigated – for example, by installing timing restrictions and making sure that the light emitted is of a colour that won't disturb wildlife."</p>	<p>Embedded environmental measures in relation to lighting are identified in Section 18.7.</p> <p>The effects of lighting have been assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 (of the ES (Document Reference: 6.4.18.4).</p>

Policy description	Relevance to assessment
<p>Development Management Policy SD11: Trees Woodland and Hedgerows states:</p> <p><i>“1. Development proposals will be permitted where they conserve and enhance trees, hedgerows and woodlands.</i></p> <p><i>2. Development proposals that affect trees, hedgerows and woodland must demonstrate that they have been informed by a full site survey, including an Ecological Survey, Arboricultural Method Statement and associated Tree Protection Plan, and include a management plan.</i></p> <p><i>3. The removal of protected trees, groups of trees woodland or hedgerows will only be permitted in exceptional circumstances and in accordance with the relevant legislation, policy and good practice recommendations. Where protected trees are subject to felling, a replacement of an appropriate number, species and size in an appropriate location will be required.</i></p> <p><i>4. Development proposals must provide adequate protection zones and buffers around hedgerows and other woodland and trees to prevent damage to root systems and taking account of future growth. A minimum buffer of 15 metres will be required between the development and ancient woodland or veteran trees.</i></p> <p><i>5. A proposed loss or damage of non-protected trees, woodland or hedgerows should be avoided, and if demonstrated as being unavoidable, appropriate replacement or compensation will be required.</i></p> <p><i>6. Development proposals must demonstrate that appropriate protection measures are in place prior to any work on site throughout the development process as part of a comprehensive landscaping plan, and that suitable opportunities for the restoration, enhancement or planting of trees, woodland, and hedgerows are identified and incorporated.</i></p> <p><i>7. Opportunities should be identified and incorporated for planting of new trees, woodlands and hedgerows. New planting should be suitable for the site conditions, use native species and be informed by and contribute to local character, and enhance or create new habitat linkages.”</i></p>	<p>Effects on the landscape character and landscape elements (trees/woodland/hedgerows) of the SDNP are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7.</p> <p>These have been developed holistically in conjunction with other environmental aspects notably: Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22).</p> <p>An arboricultural survey within the proposed DCO Order Limits has been reported in Appendix 22.16: Arboricultural Impact Assessment, Volume 4 of the ES (Document Reference: 6.4.22.16).</p>
<p>Strategic Policy SD45: Green Infrastructure states:</p> <p><i>“1. Development proposals will be permitted where they demonstrate that they:</i></p>	<p>Strategic principles to the landscape design and approach to embedded environmental</p>

Policy description	Relevance to assessment
<p><i>a) Maintain or enhance GI assets, GI links and the overall GI network; and</i></p> <p><i>b) Provide new GI, or improvements to existing green assets and green linkages, which are integrated into the development design, that meets the needs of communities both within and beyond the site's boundaries.</i></p> <p><i>2. GI proposals must contribute to multifunctional landscapes which:</i></p> <p><i>a) Strengthen connectivity and resilience of ecological networks;</i></p> <p><i>b) Incorporate GI measures that are appropriate to the type and context of the development proposal as part of an overall landscape design;</i></p> <p><i>c) Maximise opportunities to mitigate, adapt and improve resilience to climate change;</i></p> <p><i>d) Maximise opportunities for cycling and walking, including multi user routes and, where possible, facilitate circular routes; and</i></p> <p><i>e) Support health and wellbeing and improve opportunities for understanding and enjoyment of the National Park and its special qualities.</i></p> <p><i>3. Development proposals that will harm the GI network must incorporate measures that sufficiently mitigate or offset their effects.</i></p> <p><i>4. Where appropriate, the Authority will seek to secure via planning condition or legal agreement provision for the future management and/or maintenance of GI."</i></p>	<p>measures are presented in Section 18.7.</p> <p>These have been developed holistically in conjunction with other environmental aspects notably: Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22).</p>
<p>Arun Local Plan 2011-2031 (Arun District Council, July 2018)</p>	
<p>Policy LAN DM1: Protection of landscape character states:</p> <p><i>"Development within the setting of the SDNP must have special regard to the conservation of that setting, including views into and out of the Park, and will not be permitted where there would be harmful effects on these considerations.</i></p> <p><i>Development throughout the plan area should respect the particular characteristics and natural features of the relevant landscape character areas and seek, wherever possible, to reinforce or repair the character of those areas.</i></p> <p><i>The historic character and development pattern of settlements within the District should be respected, taking into account their distinct identity and setting."</i></p>	<p>Effects on the landscape character within Arun District are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7.</p>

Policy description	Relevance to assessment
<p>Policy C SP1: Countryside states: <i>“Outside the Built-Up Area Boundaries (as identified on the Policies Maps) land will be defined as countryside and will be recognised for its intrinsic character and beauty. Development will be permitted in the countryside where it is:</i> <i>[...]</i> <i>b. for quiet, informal recreation; or</i> <i>c. for green infrastructure; or</i> <i>[...]</i> <i>The Council will take into account cumulative impact of development in the consideration of planning applications.</i> <i>To ensure better management of the rural-urban fringe in those areas where significant new development is proposed, early consideration will need to be given to landscape and biodiversity enhancement, woodland management, recreation provision and access routes.”</i></p>	<p>Effects on the landscape character within Arun District are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>Cumulative effects have been considered in Section 18.14, Appendix 18.2: Viewpoint analysis, Volume 4 of the ES (Document Reference: 6.4.18.2), Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p> <p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7.</p>
<p>Horsham District Planning Framework (Horsham District Council, November 2015) The draft local plan submission is due to be issued to the Secretary of State, July 2024.</p>	
<p>Strategic Policy 2: Strategic Development states: <i>“To maintain the district’s unique rural character whilst ensuring that the needs of the community are met through sustainable growth and suitable access to services and local employment, the spatial strategy to 2031 is to:</i> <i>[...]</i></p>	<p>Effects on the landscape character within Horsham District is assessed in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>

Policy description

12. Retain and enhance natural environmental resources, including landscapes and landscape character, biodiversity, and retaining and enhancing environmental quality including air, minimises energy and resource use and provides flood mitigation. ...”

Strategic Policy 25: The Natural Environment and Landscape Character states:

“The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats will be protected against inappropriate development.

The Council will support development proposals which:

1. Protects, conserves and enhances the landscape and townscape character, taking into account areas identified as being of landscape importance, the individual settlement characteristics, and maintains settlement separation.

[...]

4. Conserve and where possible enhance the setting of the SDNP.”

Strategic Policy 26: Countryside Protection states
“Outside built-up area boundaries, the rural character and undeveloped nature of the countryside will be protected against inappropriate development.

[...]

In addition, proposals must be of a scale appropriate to its countryside character and location.

Development will be considered acceptable where it does not lead, either individually or cumulatively, to a significant increase in the overall level of activity in the countryside, and protects, and/or conserves, and/or enhances, the key features and characteristics of the landscape character area in which it is located, including;

Relevance to assessment

The design of the onshore elements of the Proposed Development has been an iterative process (**Chapter 3: Alternatives, Volume 2** of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Strategic principles to the landscape design and approach to embedded environmental measures are presented in **Section 18.7**.

Effects on the landscape character within Horsham District are assessed in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3).

The design of the onshore elements of the Proposed Development has been an iterative process (**Chapter 3: Alternatives, Volume 2** (of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible and retain the overall rural character of the landscape.

Strategic principles to the landscape design and approach

Policy description	Relevance to assessment
<p>1. <i>The development pattern of the area, its historical and ecological qualities, tranquillity and sensitivity to change;</i></p> <p>2. <i>The pattern of woodlands, fields, hedgerows, trees, waterbodies and other features; and</i></p> <p>3. <i>The landform of the area.”</i></p>	<p>to embedded environmental measures are presented in Section 18.7. Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
<p>Policy 30 Protected Landscapes states:</p> <p><i>“1. The natural beauty and public enjoyment of the High Weald AONB and the adjoining SDNP will be conserved and enhanced and opportunities for the understanding and enjoyment of their special qualities will be promoted. Development proposals will be supported in or close to protected landscapes where it can be demonstrated that there will be no adverse impacts to the natural beauty and public enjoyment of these landscapes as well as any relevant cross boundary linkages.</i></p> <p><i>2. Proposals should have regard to any management plans for these areas and must demonstrate:</i></p> <p><i>a. How the key landscape features or components of natural beauty will be conserved and enhanced. This includes maintaining local distinctiveness, sense of place and setting of the protected landscapes, and if necessary providing mitigation or compensation measures....”</i></p>	<p>Effects on the High Weald AONB and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>Landscape effects on the SDNP and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p>
<p>Policy 33 Development Principles states:</p> <p><i>“In order to conserve and enhance the natural and built environment developments shall be required to: [...]</i></p> <p><i>2. Ensure that it is designed to avoid unacceptable harm to the amenity of occupiers/users of nearby property and land, for example through overlooking or noise, whilst having regard to the sensitivities of surrounding development;</i></p> <p><i>3. Ensure that the scale, massing and appearance of the development is of a high standard of design and layout and where relevant relates sympathetically with the built surroundings, landscape, open spaces and</i></p>	<p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded environmental measures are presented in Section 18.7.</p>

Policy description	Relevance to assessment
<p><i>routes within and adjoining the site, including any impact on the skyline and important views;</i></p> <p><i>4. Are locally distinctive in character, respect the character of the surrounding area (including its overall setting, townscape features, views and green corridors) and, where available and applicable, take account of the recommendations/policies of the relevant Design Statements and Character Assessments;</i></p> <p><i>[...]</i></p> <p><i>6. Presume in favour of the retention of existing important landscape and natural features, for example trees, hedges, banks and watercourses. Development must relate sympathetically to the local landscape and justify and mitigate against any losses that may occur through the development;</i></p> <p><i>....'</i></p>	<p>Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
<p>Draft Horsham District Local Plan 2019-2036 (Horsham District Council, 2019)</p>	
<p>Strategic Policy 27: The Natural Environment and Landscape Character states:</p> <p><i>“The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats, will be protected against inappropriate development. The Council will expect development proposals to be landscape led from the outset so that they clearly inform the design and layout. Proposals will also be required to:</i></p> <p><i>1. Protect, conserve and enhance the landscape and townscape character, taking into account areas identified as being of landscape importance, the individual settlement characteristics, and maintain settlement separation;</i></p> <p><i>2. Maintain and enhance the Green Infrastructure Network, the Nature Recovery Network and, where practicable, help to address any identified deficiencies in the District;</i></p> <p><i>[...]</i></p> <p><i>4. Incorporate SUDS into a scheme in an optimal location for their purpose whilst also securing landscape enhancements and good quality spaces. Proposals will be expected to provide details to demonstrate that the whole life management and maintenance of the SUDS are appropriate,</i></p>	<p>Landscape character within Horsham District is assessed in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p> <p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded measures are presented in Section 18.7. Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan, including</p>

Policy description	Relevance to assessment
<p><i>deliverable and will not cause harm to the natural environment and/or landscape; and</i></p> <p><i>5. Where applicable, conserve and, where possible, enhance the setting of the South Downs National Park and the High Weald Area of Outstanding Natural Beauty.”</i></p>	<p>sustainable drainage systems (SUDs) within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
<p>Strategic Policy 28: Countryside Protection is similar to Policy C SP1 of the adopted Horsham District Planning Framework, November 2015.</p>	<p>As above.</p>
<p>Strategic Policy 30: Protected Landscapes states:</p> <p><i>“1. The natural beauty and public enjoyment of the High Weald AONB and the adjoining South Downs National Park will be conserved and enhanced and opportunities for the understanding and enjoyment of their special qualities will be promoted. Development proposals will be supported within the High Weald AONB and in the setting of protected landscapes where it can be demonstrated that there will be no adverse impacts to the natural beauty and public enjoyment of these landscapes as well as any relevant cross boundary linkages.</i></p> <p><i>2. Proposals should have regard to any management plans for these areas and must demonstrate:</i></p> <p><i>a. How the key landscape features or components of natural beauty will be conserved and enhanced. This includes having appropriate regard to 'dark skies', and maintaining local distinctiveness, sense of place and setting of the protected landscapes, and if necessary providing mitigation or compensation measures;</i></p> <p><i>b. How the public enjoyment of these landscapes will be retained; and</i></p> <p><i>c. How the proposal supports the economy of the protected landscape and will contribute to the social wellbeing of the population who live and work in these areas.</i></p> <p><i>3. In the case of major development proposals in or adjoining protected areas, applicants will also be required to demonstrate why the proposal is in the public interest and what alternatives to the scheme have been considered.”</i></p>	<p>Landscape effects on the High Weald AONB and its SLQs are assessed in Section 18.9 of this chapter.</p> <p>Landscape effects on the SDNP and its Special Landscape Qualities are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p> <p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded measures are presented in Section 18.7. Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together</p>

Policy description	Relevance to assessment
<p>Strategic Policy 33: Development Quality states: <i>“High quality and inclusive design for all development in the District will be required based on a clear understanding of the local, physical, social, economic, environmental and policy context for development. In particular, development will be required to:</i></p> <ol style="list-style-type: none"> 1. <i>Provide an attractive, functional, accessible, safe and adaptable environment in accordance with the principles of the National Design Guide, or any future updates;</i> 2. <i>Complement and respond to locally distinctive characters and heritage of the District. In appropriate locations where existing character allows, unique modern new design which has a high standard of architectural principles may be considered;</i> 3. <i>Contribute a sense of place both in the buildings and spaces themselves and in the way they integrate with their structural surroundings and the landscape in which they sit;</i> 4. <i>Make efficient use of land and optimise the provision and use of buildings and open space within a site, taking into account the character, appearance and needs, together with the appearance and needs of the surrounding area;</i> 5. <i>Contribute to, and enhance, the green infrastructure that makes the District a more pleasant place to live. Existing landscape belts, trees, and hedgerows that are field boundaries and form the character of the landscape should be retained; and</i> 6. <i>Help secure a framework of high quality open spaces which meets the identified needs of the community as set out in any relevant Neighbourhood Plan, Design Statement and Character Statement.”</i> <p>Strategic Policy 34 also advises on the Development Principles.</p>	<p>with the Outline LEMP (Document Reference: 7.10).</p> <p>The design of the onshore elements of the Proposed Development has been an iterative process (Chapter 3: Alternatives, Volume 2 of the ES (Document Reference: 6.2.3)) that has sought to avoid sensitive features in the landscape wherever possible. Embedded measures are presented in Section 18.7. Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>

Policy description	Relevance to assessment
<p>Mid Sussex District Plan 2014 – 2031 (Mid Sussex District Council, 2018)</p> <p>Policy DP12: Protection and Enhancement of Countryside states: <i>“The countryside will be protected in recognition of its intrinsic character and beauty. Development will be permitted in the countryside, defined as the area outside of built-up area boundaries on the Policies Map, provided it maintains or where possible enhances the quality of the rural and landscape character of the District, [...] The Mid Sussex Landscape Character Assessment, the West Sussex County Council Strategy for the West Sussex Landscape, the Capacity of Mid Sussex District to Accommodate Development Study and other available landscape evidence (including that gathered to support Neighbourhood Plans) will be used to assess the impact of development proposals on the quality of rural and landscape character. ...”</i></p>	<p>Effects on the landscape character within Mid Sussex District are assessed in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
<p>Policy DP16: High Weald Area of Outstanding Natural Beauty states: <i>“Development within the High Weald Area of Outstanding Natural Beauty (AONB), as shown on the Policies Maps, will only be permitted where it conserves or enhances natural beauty and has regard to the High Weald AONB Management Plan, in particular;</i></p> <ul style="list-style-type: none"> • <i>the identified landscape features or components of natural beauty and to their setting;</i> • <i>the traditional interaction of people with nature, and appropriate land management;</i> • <i>character and local distinctiveness, settlement pattern, sense of place and setting of the AONB; and</i> • <i>the conservation of wildlife and cultural heritage.</i> <p><i>Small scale proposals which support the economy and social well-being of the AONB that are compatible with the conservation and enhancement of natural beauty will be supported.</i></p> <p><i>Development on land that contributes to the setting of the AONB will only be permitted where it does not detract from the visual qualities and essential characteristics of the AONB, and in particular should not adversely affect the views into and out of the AONB by virtue of its location or design.”</i></p>	<p>Landscape effects on the High Weald AONB and its Special Landscape Qualities are assessed in Section 18.9 of this chapter.</p>

Policy description	Relevance to assessment
<p>Policy DP18: Setting of the SDNP states: <i>“Development within land that contributes to the setting of the SDNP will only be permitted where it does not detract from, or cause detriment to, the visual and special qualities (including dark skies), tranquillity and essential characteristics of the National Park, and in particular should not adversely affect transitional open green spaces between the site and the boundary of the SDNP, and the views, outlook and aspect, into and out of the National Park by virtue of its location, scale, form or design. Development should be consistent with National Park purposes and must not significantly harm the National Park or its setting. Assessment of such development proposals will also have regard to the South Downs Partnership Management Plan and emerging National Park Local Plan and other adopted planning documents and strategies.”</i></p>	<p>Landscape effects on the SDNP and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p>
<p>Policy DP22: Rights of Way and Other Recreational Routes states <i>“Rights of way, Sustrans national cycle routes and recreational routes will be protected by ensuring development does not result in the loss of or does not adversely affect a right of way or other recreational routes unless a new route is provided which is of at least an equivalent value and which does not sever important routes. Access to the countryside will be encouraged by:</i></p> <ul style="list-style-type: none"> • <i>Ensuring that (where appropriate) development provides safe and convenient links to rights of way and other recreational routes;</i> • <i>Supporting the provision of additional routes within and between settlements that contribute to providing a joined up network of routes where possible;</i> • <i>Where appropriate, encouraging making new or existing rights of way multi-functional to allow for benefits for a range of users. (Note: ‘multi-functional will generally mean able to be used by walkers, cyclists and horse-riders).’</i> 	<p>Visual effects on PRow and Sustrans Cycle Routes are assessed in Sections 18.9 to 18.13 and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4)</p> <p>Information on the amenity of recreational routes is provided in Chapter 17: Socio-economics, Volume 2 of the ES (Application Document Reference: 6.2.17).</p>
<p>Policies relating to trees, woodlands and hedgerows are included under Biodiversity in Appendix 23.1: Policy and legislation tables, Volume 4 of the ES (Document Reference: 6.4.23.1).</p>	

Policy description	Relevance to assessment
<p>Mid Sussex District Council Mid Sussex District Plan 2021 – 2039 Consultation Draft (Regulation 18) draft policies (Mid Sussex District Council, 2022)</p> <p>Draft Policy DPN3: Green Infrastructure states that <i>“Green infrastructure assets, links and the overall multifunctional network will be protected and enhanced by ensuring development: • Responds to and incorporates existing on-site and offsite green infrastructure into the development design; and • Provides new green infrastructure integrated into the development design; and • Contributes to the wider green infrastructure network by taking opportunities to improve, enhance, manage and restore green infrastructure, and providing links to existing green infrastructure including outside the development’s boundaries.”</i></p> <p>Additionally, <i>“applicants should consider from the outset the landscape assets of the site and how they may be used to create part of a coherent landscape structure that links to existing and proposed landscapes to form open space networks whenever possible, revealing existing landscape features.”</i></p>	<p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7. These have been developed holistically in conjunction with other environmental aspects notably: Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22).</p>
<p>Draft Policy DPN8: Light Impacts and Dark Skies states <i>“Development proposals must demonstrate that all opportunities to reduce light pollution (including sky glow, glare and light spillage) have been taken including minimising impacts on local amenity, intrinsically dark landscapes including protected landscapes areas important for nature conservation and nature recovery.</i></p> <p><i>Artificial lighting proposals (including outdoor lighting, floodlighting and new street lighting) should be minimised in terms of intensity and number of fittings. The applicant should demonstrate that:</i></p> <ul style="list-style-type: none"> <i>• the minimum amount of lighting necessary to achieve its purpose is specified or otherwise justified on safety or security grounds; and</i> <i>• the design and specification of the lighting would minimise sky glow, glare and light spillage in relation to the visibility of the night sky, local amenity and local character; and</i> <i>• the means of lighting would be unobtrusively sited and well-screened by landscaping; and</i> <i>• low energy lighting is used; and</i> 	<p>Embedded environmental measures in relation to lighting are identified in Section 18.7.</p> <p>The effects of lighting have been assessed in Appendix 18.2: Viewpoint analysis, Volume 4 of the ES (Document Reference: 6.4.18.2) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>

Policy description	Relevance to assessment
<ul style="list-style-type: none"> • <i>there would not be an adverse impact on wildlife such as through consideration of the appropriate colour and temperature of lighting.</i> <p>Draft Policy DPC1: Protection and Enhancement of the Countryside states that <i>“The countryside will be protected in recognition of its intrinsic character and beauty. Development will be permitted in the countryside, defined as the area outside of built-up area boundaries on the Policies Map, provided it maintains or where possible enhances the quality of the rural and landscape character of the District”...</i></p> <p><i>“Development proposals should demonstrate they are informed by landscape character. The Mid Sussex Landscape Character Assessment, the West Sussex County Council Strategy for the West Sussex Landscape, the Capacity of Mid Sussex District to Accommodate Development Study and other available landscape evidence (including that gathered to support Neighbourhood Plans) will be used to assess the impact of development proposals on the rural and landscape character.”</i></p>	<p>Effects on the landscape character within Mid Sussex District is assessed in Sections 18.9 to 18.13 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p> <p>Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the Design and Access Statement (Document Reference: 5.8) for the onshore substation has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
<p>Draft Policy DPC4: High Weald Area of Outstanding Natural Beauty states <i>“Development within the High Weald Area of Outstanding Natural Beauty (AONB), as shown on the Policies Maps, will only be permitted where it conserves and enhances natural beauty and has regard to the High Weald AONB Management Plan, in particular;</i></p> <ul style="list-style-type: none"> • <i>the identified landscape features or components of natural beauty and to their setting;</i> • <i>the traditional interaction of people with the landscape and nature, and appropriate land management;</i> • <i>the historic landscape, character and local distinctiveness, historic settlement pattern, sense of place and setting of the AONB; and</i> • <i>the conservation of wildlife and cultural heritage.</i> <p><i>Development should demonstrate a positive contribution to the objectives of the High Weald AONB Management Plan and take account of the High Weald Housing Design Guide including applying a landscape-led design approach that reflects High</i></p>	<p>Landscape effects on the High Weald AONB and its SLQs are assessed in Section 18.9 of this chapter.</p>

Policy description	Relevance to assessment
<p><i>Weald character; using high quality architecture; responding to the historic pattern and character of settlements; and protecting dark skies.</i></p> <p><i>Proposals which support the land-based economy and social well-being of local communities within the AONB that are compatible with the conservation and enhancement of natural beauty will be supported.</i></p> <p><i>Development on land that contributes to the setting of the AONB will only be permitted where it does not detract from the visual qualities and essential characteristics of the AONB, and in particular should not adversely affect the landscape character and views into and out of the AONB by virtue of its location or design.”</i></p>	<p>Landscape effects on the SDNP and its SLQs are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.</p>
<p>Draft Policy DPC5: Setting of the South Downs National Park provides no update to the wording of Policy DP18: Setting of the SDNP.</p>	<p>Visual effects on PRow and Sustrans Cycle Routes are assessed in Sections 18.10 to 18.13 and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p> <p>Information on the amenity of recreational routes is provided in Chapter 17: Socio-economics, Volume 2 of the ES (Document Reference: 6.2.17).</p>
<p>Draft Policy DPT2: Rights of Way and Other Recreational Routes provides no update to the wording of Policy DP22: Rights of Way and Other Recreational in the current Local Plan.</p>	<p>Policies relating to trees, woodlands and hedgerows are included under Biodiversity in Appendix 23.1: Policy and legislation tables, Volume 4 of the ES (Document Reference: 6.4.23.1).</p>

Other relevant information and guidance

- 18.2.12 In addition to the Landscape Institute's and Institute of Environmental Management and Assessment (IEMA) *Guidelines for Landscape and Visual Impact Assessment, Third Edition, (GLVIA3) (2013)*, other key methodological guidance for the LVIA, but not limited to, include:
- Landscape Institute (2019). *Visual Representation of Development Proposals*;
 - Natural England, (2014). *An Approach to Landscape Character Assessment*;
 - Natural England, (2019). *An Approach to Landscape Sensitivity Assessment*;
 - NatureScot, (2017). *Visual Representation of Wind Farms, Guidance (Version 2.2)*;
 - NatureScot, (2012). *Assessing the Cumulative Impact of Onshore Wind Energy Developments*;
 - IEMA, (2015). *Environmental Impact Assessment Guidance to Shaping Quality Development*;
 - IEMA, (2017). *Delivering Proportionate EIA. A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice*; and
 - IEMA, (2019). *EIA Quality Mark Article – Predicting the growth of tree and hedge planting when determining the effectiveness of mitigation*.
- 18.2.13 A full list of guidance documents is provided in **Section 18.19**.

18.3 Consultation and engagement

Overview

- 18.3.1 This section describes the stakeholder engagement undertaken for Rampion 2. This consists of early engagement, the outcome of, and response to, the Scoping Opinion (Planning Inspectorate, 2020a) in relation to the landscape and visual impact assessment, the Evidence Plan Process (EPP), non-statutory consultation and Rampion 2's statutory consultation. An overview of consultation and engagement undertaken for Rampion 2 relevant to the EIA is outlined in **Section 5.4 of Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5).
- 18.3.2 Given the social distancing restrictions in place due to the COVID-19 pandemic from 2020 to 2022, technical consultation relating to landscape and visual impact has taken place online, primarily in the form of conference calls using Microsoft Teams.

Early engagement

- 18.3.3 Early engagement was undertaken with a number of prescribed and non-prescribed consultation bodies and local authorities in relation to the LVIA.

- 18.3.4 A joint LVIA and SLVIA meeting to introduce the Proposed Development and the proposed scope of the assessment was undertaken with the following stakeholders:
- National Trust – 17 June 2020; and
 - SDNPA and Natural England – 18 June 2020.
- 18.3.5 Early engagement regarding viewpoint selection with the High Weald AONB was undertaken via email correspondence in May and June 2020.

Scoping Opinion

- 18.3.6 Rampion Extension Development Limited (RED) submitted a Scoping Report (RED, 2020) and request for a Scoping Opinion to the Secretary of State (administered by the Planning Inspectorate) on 2 July 2020. A Scoping Opinion was received on 11 August 2020 (Planning Inspectorate, 2020a). The Scoping Report (RED, 2020) sets out the proposed landscape and visual impact assessment methodologies, outline of the baseline data collected to date and proposed, and the scope of the assessment. **Table 18-5** sets out the comments received in Section 5 of the Planning Inspectorate’s Scoping Opinion (Planning Inspectorate, 2020a) ‘Aspect based scoping tables – Onshore’ and how these have been addressed in this ES. A full list of the Planning Inspectorate’s Scoping Opinion (Planning Inspectorate, 2020a) comments and responses is provided in [Appendix 5.1: Response to the Scoping Opinion, Volume 4](#) of the ES (Document Reference: 6.4.5.1). Regard has also been given to other stakeholder comments that were received in relation to the Scoping Report (RED, 2020).

Table 18-5 Planning Inspectorate Scoping Opinion (2020a) responses - LVIA

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
5.1.1	<p><i>“Effects of the cable corridor and Landfall during operation upon landscape and visual receptors within 2km.</i></p> <p><i>The Scoping Report states that the cable corridor will be reinstated and restored post construction. There are insufficient details in the Scoping Report to understand the type of landscape features which may be lost during the construction phase and also no details of the types of planting which may not be allowed during reinstatement (for example, lack of tree planting on and near to the cable corridor). The cable corridor may look very different during operation as it</i></p>	<p>The effects of the onshore cable corridor on landscape and visual receptors during the operation and maintenance phase have been summarised in the main assessment in Section 18.12 and Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p> <p>Strategic principles to the landscape design and approach to embedded environmental measures are presented in Section 18.7. Appendix C</p>

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
	<p><i>did preconstruction. On this basis, the Inspectorate does not agree to scope this matter out.</i></p>	<p>National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Design within the DAS (Document Reference: 5.8) for the onshore substation has been developed together with the Outline Landscape and Ecology Management Plan (Document Reference: 7.10).</p> <p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during the construction phase are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Appendix B: Vegetation retention plans of the Outline Code of Construction Practice (CoCP) (Document Reference: 7.2).</p> <p>Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) for the onshore substation and the reinstatement of landscape features or elements has been developed together with the Outline LEMP (Document Reference: 7.10).</p>
5.1.2	<p><i>“Receptors beyond the Zone of Theoretical Visibility.</i></p> <p><i>The Scoping Report states that any receptors beyond the Zone of Theoretical Visibility will not have a view of the onshore elements and impacts are therefore scoped out. The information provided in the Scoping Report lacks detailed information from which to be able to</i></p>	<p>Zones of Theoretical Visibility (ZTVs) for the onshore substation site at Oakendene and the onshore cable corridor are illustrated in Figures 18.2a – 18.4a-c, Volume 3 of the ES (Document Reference: 6.3.18).</p> <p>For the avoidance of doubt, if an area on these maps is shown to be outwith the ZTV then there will be</p>

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
	<i>fully understand what the ZTV applied is. The ES must include a clear figure of an appropriate scale and size to present the ZTV as well as justification for definition of study areas and sensitive receptors within the ZTV.”</i>	<u>no view</u> of the onshore elements of the Proposed Development from these locations and are therefore scoped out. The technical basis for the ZTV is described in Section 18.4 .
5.1.3	<i>“A 2km study area is proposed on the basis that the same study area was used for Rampion 1. The study area for the Proposed Development should be applied taking into account specifics for the area around the proposed cable route.”</i>	A 2km Study Area has been selected for the LVIA. Detail and justification for the Study Area is provided in Section 18.4 .
5.1.4	<i>“The scale of the figures provided in the Scoping Report show the route of the cable corridor in its entirety and it is therefore difficult to understand which landscape receptors may be affected. The ES should contain figures at a scale which would ensure that the content is more easily understood.”</i>	Detailed figures illustrating the landscape and visual receptors within the onshore cable corridor and the LVIA Study Area are illustrated in Figures 18.2-4a-c, Volume 3 of the ES (Document Reference:6.3.18).
5.1.5	<i>“The Inspectorate expects the assessment to have regard to the Strategy for the West Sussex Landscape; Local Distinctiveness Study of West Sussex as well as the High Weald AONB Management Plan 2019-2024.”</i>	Acknowledged. These documents have been taken into consideration in the assessment in Sections 18.9 to 18.13 , and in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).
5.1.6	<i>“High Weald AONB is shown in Figure 6.2.3 to be in the study area for LVIA, however paragraph 6.2.39 state that this is beyond the study area. On the basis that the nature, scale and location of the works at the proposed and existing substations (including connection between them) are not fully defined at this stage, an assessment of significant effects on the AONB should be provided as part of the ES (including cross reference</i>	Landscape effects on the High Weald AONB and its Special Landscape Qualities are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Sections 18.9 to 18.13 of this chapter.

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
	<i>to the SLVIA and socio-economic assessments).</i> ”	
5.1.7	<i>“There are no details provided in the Scoping Report regarding landscape effects on community amenities, or schools. The ES should assess impacts on all receptor groups and the location of those receptors which have been assessed should be included in clear figures at an appropriate scale.”</i>	Visual effects on community amenities or schools are included within the assessment of settlements, where relevant in Sections 18.9 to 18.13 and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).
5.1.8	<i>“The Scoping Report refers to impacts beyond and in the ZTV, however it is not currently clear what the ZTV for onshore works and the substation are as no ZTV has been prepared. The ES should provide details of the ZTV for all onshore workings and assessments should be made for impacts during construction, operation and decommissioning.”</i>	ZTVs for the onshore elements of the Proposed Development (onshore substation site at Oakendene and the onshore cable corridor) are illustrated in Figures 18.2 – 18.4a-c, Volume 3 of the ES (Document Reference: 6.3.18). The LVIA includes an assessment of the onshore elements of the Proposed Development during the construction, operation and maintenance, and decommissioning phases.
5.1.9	<i>“The proposed substation location is identified as being ‘near to’ the existing Bolney substation. With approximate dimensions of 300m x 150m x 15m, the effects on landscape and visual amenity of this new structure by itself and any cumulative impacts with the existing substation and other existing or proposed structures, should be assessed in the ES.”</i>	The LVIA includes the assessment (Sections 18.9 to 18.10) of the onshore substation at Oakendene and the existing National Grid Bolney substation extension, taking into account other cumulative developments within the LVIA Study Area. This includes the nearby existing National Grid Bolney substation and Rampion 1 onshore substation.
5.1.10	<i>“The Scoping Report states that loss of landscape features such as trees, hedgerows, Ancient Woodlands will be avoided “where possible”. A tree survey and hedgerow survey should be completed to inform the ES. The ES should assess the impacts if such</i>	Arboricultural surveys were carried out between May 2021 and January 2023 and the assessment is reported in Appendix 22.16: Arboricultural Impact Assessment, Volume 4 of the ES (Document Reference: 6.4.22.16)

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
	<i>features are to be removed and explain any mitigation measures to reduce impacts.”</i>	which has informed the landscape effects in this chapter.
5.1.11	<i>“The Scoping Report states that up to 4 trenches will be required for the installation of the onshore corridor. The ES should report the number of trenches to be used and also dimensions of each and how long they would remain open for. The intention is to use trenchless techniques where possible; the ES should assess the landscape effects which may be created by open trenches.”</i>	<p>Table 18-24 provides a summary of the assessment assumptions of the onshore elements of the Proposed Development with a full description provided in Section 4.4 within Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4).</p> <p>Effects on landscape character/elements as a result of the installation of the onshore cable corridor are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and summarised in Section 18.11 of this chapter.</p>
5.1.12	<i>“The ES should include all different types of development which may lead to a cumulative impact, not just those which are similar in nature to the Proposed Development. Details of agreements with relevant consultation bodies as to the scope of projects to be included should be presented as part of the ES.”</i>	<p>The approach to the Cumulative Effects Assessment (CEA) and cumulative developments included in the ES are reported in Chapter 5: Approach to the EIA, Volume 2 of the ES (Document Reference: 6.2.5) and Appendix 5.4: Cumulative effects assessment shortlisted developments, Volume 4 of the ES (Document Reference: 6.4.5.4).</p>
5.1.13	<i>“Efforts should be made to agree the location of viewpoints to assess impacts from the onshore cable corridor during construction and operation with relevant consultation bodies. Details of the agreement should be included in the ES.”</i>	<p>Viewpoints have been agreed with stakeholders including SDNPA, Natural England, West Sussex County Council, High Weald AONB and Horsham District Council as outlined in Section 18.11.</p>
5.1.14	<i>“It is noted that computer models will be used to inform the LVIA assessment, and the ES should contain details of these various</i>	<p>The methodology used to illustrate the ZTVs and visualisations is reported in Appendix 18.1: Landscape and visual impact</p>

PINS ID number	Scoping Opinion comment	How this is addressed in this ES
5.1.15	<p><i>methods used to inform the landscape and visual assessment”</i></p> <p><i>“The night time lighting assessment should be appended to the ES together with evidence of consultation with relevant bodies. Visual representations should also be included.”</i></p>	<p>assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1).</p> <p>Where required, construction lighting will be limited to directional task lighting positioned to minimise glare and nuisance to residents and recreational receptors as noted in Section 18.7.</p> <p>The effects of lighting have been assessed in Appendix 18.2: Viewpoint analysis, Volume 4 of the ES (Document Reference: 6.4.18.2), Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p> <p>A lighting assessment in relation to the offshore elements of the Proposed Development (wind generator turbines) is reported in Chapter 15: Seascape, landscape and visual impact assessment, Volume 2 of the ES (Document Reference: 6.2.15).</p>

Evidence Plan Process (EPP)

- 18.3.7 The Evidence Plan Process (EPP) has been set up to provide a formal, non-legally binding, independently chaired forum to agree the scope of the EIA and Habitats Regulations Assessment (HRA), and the evidence required to support the DCO Application. The EPP commenced in January 2020 and has continued throughout the EIA helping to inform the ES.
- 18.3.8 For LVIA, engagement has been undertaken via the EPP Expert Topic Group (ETG) ‘Seascape, Landscape, Archaeology & Cultural Heritage and Marine Archaeology’ ETG meetings. The first ‘Seascape, Landscape, Archaeology & Cultural Heritage and Marine Archaeology’ was held by conference call on 15 September 2020. The conference call was attended by the following stakeholders:
- West Sussex County Council (WSCC);

- Natural England (NE);
- Historic England;
- South Downs National Park Authority (SDNPA);
- Brighton and Hove City Council;
- Horsham District Council;
- Chichester District Council;
- Arun District Council;
- Isle of Wight Council;
- Mid Sussex District Council;
- National Trust;
- High Weald AONB Partnership; and
- Chichester Harbour Conservancy AONB.

- 18.3.9 The LVIA section of the ETG meeting on 15 September 2020 covered the scope of the LVIA, the baseline data and supporting assessments to be used to undertake the assessment, proposed embedded environmental measures and the assessment methodology. The engagement also presented the proposed approach to address the Scoping Opinion comments detailed in **Table 18-5**.
- 18.3.10 The second ETG meeting for ‘Seascape, Landscape, Archaeology & Cultural Heritage and Marine Archaeology’ was held on 18 March 2021 with the same key stakeholders as the meeting in September 2020. The LVIA section of the second ETG meeting covered an update on baseline collation, informal consultation, site visits, design input, Preliminary Environmental Information Report (PEIR) assessment and initial findings, and next steps.
- 18.3.11 The third ETG meeting for ‘Seascape, Landscape, Archaeology & Cultural Heritage and Marine Archaeology’ was held on 18 March 2021 with the same key stakeholders as the meeting in September 2020 and March 2021. The LVIA section of the third ETG meeting provided an update on progress since PEIR and feedback following the first Statutory Consultation exercise undertaken 14 July to 16 September 2021 (details in **Table 18-6**).
- 18.3.12 The fourth ETG meeting was held on 10 November 2022 for Onshore Historic Environment and Landscape and the fifth ETG meeting held on the 01 March 2023 and 21 March 2023 (21 March 2023 ETG for Landscape only due to attendance availability). The fourth ETG meeting on 10 November 2022 provided a project update during the second statutory consultation exercise (October – November 2022) and an update on actions taken in response to feedback following the first statutory consultation exercise undertaken 14 July to 16 September. The fifth ETG meeting on 01 March and 21 March 2023 provided a project update on the third Statutory Consultation exercise (February – March 2023) and an update on actions taken in response to feedback following the second Statutory Consultation exercise undertaken from 18 October 2023 to 29 November 2022.

- 18.3.13 A sixth and final ETG meeting was held on 14 June 2023 for Onshore Historic Environment and Landscape. The sixth ETG meeting held on 14 June 2023 provided an update on progress since the fifth ETG meeting, EIA considerations with respect to the final onshore cable route, survey and data collection update and a review of previous ETG actions.
- 18.3.14 Further information is provided in the [Evidence Plan](#) (Document Reference: 7.21).

Non-statutory consultation

Overview

- 18.3.15 Informal Non-statutory consultation captures all consultation and engagement outside of statutory consultation (formal consultation) and has been ongoing with a number of prescribed and non-prescribed consultation bodies and local authorities in relation to landscape and visual impact. A summary of the informal consultation undertaken since completion of the Scoping Report is outlined in this section.

Further engagement

- 18.3.16 Consultation in relation to the LVIA Study Area and viewpoint selection was undertaken in November and December 2020 with the SDNPA, Natural England, WSCC, Horsham District Council, Arun District Council and Mid-Sussex District Council.
- 18.3.17 A technical note was issued to the above stakeholders on 10 November 2020 and 4 December 2020 describing the LVIA Study Area and viewpoint selection process. SDNPA, WSCC and Horsham District Council were in agreement to the list of viewpoints and provided further comments on a number of additional views to be included which have been taken into account. No response was received by Arun District Council or Mid-Sussex District Council. Natural England deferred their response to the SDNPA and the High Weald AONB Partnership.
- 18.3.18 The High Weald AONB provided a separate response to viewpoint selection in June 2020.
- 18.3.19 A meeting was held on 02 August 2022 with SDNPA and WSCC to provide an overall survey progress update with the LVIA section of the meeting focusing on viewpoint photography. Following the meeting on the 02 August 2022 a technical note was issued to SDNPA, WSCC and NE on 15 August 2022 which outlined proposed additional viewpoint locations with respect to updates to the onshore cable route proposals included as part of the second statutory consultation exercise (October – November 2022).

Non-statutory Consultation exercise – January 2021 / February 2021

- 18.3.20 RED carried out a non-statutory consultation exercise for a period of four weeks from 14 January 2021 to 11 February 2021. This non-statutory consultation exercise aimed to engage with a range of stakeholders including the prescribed and non-prescribed consultation bodies, local authorities, Parish Councils and general public with a view to introducing the Proposed Development and seeking early feedback on the emerging designs.

- 18.3.21 The key themes which emerged from the non-statutory consultation exercise in January 2021 relating to LVIA are:
- concerns over the location of the Wineham Lane onshore substation search area and their proximity to nearby properties;
 - concerns over minimising impacts on sensitive sites including ancient hedgerows, ancient woodland, and trees;
 - onshore substation design and potential screening;
 - concerns over the use of the Wineham Lane for construction traffic in terms of visual impacts;
 - details around construction programming and phasing; and
 - questions around the management of PRoW during construction including temporary and permanent diversions, and reinstatement.
- 18.3.22 Further detail about the results of the non-statutory consultation exercise can be found in the [Consultation Report](#) (Document Reference: 5.1).

Statutory Consultation exercises

First Statutory Consultation exercise – July to September 2021

- 18.3.23 Rampion 2's first Statutory Consultation Exercise under Section 42 of the Planning Act 2008 ran from 14 July to 16 September 2021, a period of nine weeks. The PEIR (RED, 2021) was published as part of Rampion 2's first Statutory Consultation exercise which provided preliminary information on the LVIA within Chapter 19: Landscape and Visual.
- 18.3.24 **Table 18-6** provides a summary of the key themes of the feedback received in the first Statutory Consultation exercise in relation to the LVIA and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the first Statutory consultation exercise in 2021 and the responses to those comments is provided in the [Consultation Report](#) (Document Reference: 5.1).

Table 18-6 First Statutory Consultation exercise (July – September 2021) feedback

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) Adur District Council, Horsham District Council and West Sussex County Council.	Concerns regarding the temporary impact of the cabling installation including construction compounds, on protected landscapes and communities	The construction effects of the onshore cable corridor on designated landscapes and visual effects on communities have been assessed in detail in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and Appendix 18.4: Visual assessment, Volume 4 of the ES

Stakeholder	Theme	How this is addressed in this ES
<p>Multiple stakeholders including (but not restricted to) Natural England and West Sussex County Council.</p>	<p>Careful consideration must be given to the need for any temporary or permanent lighting, which should be sensitively designed and managed.</p>	<p>(Document Reference: 6.4.18.4), and summarised in Section 18.11 to 18.13.</p> <p>Where required, construction lighting will be limited to directional task lighting positioned to minimise glare and nuisance to residents and recreational receptors as noted in Section 18.7.</p> <p>The effects of lighting have been assessed in Sections 18.9 to 18.10, Appendix 18.2: Viewpoint analysis, Volume 4 of the ES (Document Reference: 6.4.18.2) and Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4).</p>
<p>Multiple stakeholders including (but not restricted to) West Sussex County Council, Horsham District Council, Natural England and South Downs National Park Authority (SDNPA).</p>	<p>The temporary construction will result in vegetation loss, this should be avoided</p>	<p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>An Outline Landscape and Ecological Management Plan (LEMP) (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats.</p>
<p>Multiple stakeholders including (but not restricted to) SDNPA, WSCC and Natural England.</p>	<p>Advised to include an arboricultural report to support the findings of the landscape and visual impact assessment.</p>	<p>Arboriculture Surveys and Vegetation Retention Plans form part of the additional survey information required to better inform the LVIA and assessment of SDNP and SLQs.</p> <p>The arboricultural impact assessment is presented in Appendix 22.16 Arboricultural Impact Assessment, Volume 4 of the ES (Document Reference: 6.4.22.16)</p>

Stakeholder	Theme	How this is addressed in this ES
<p>Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.</p>	<p>The assessment should consider visual impact to the wider surrounds, landform and visual character. The special landscape qualities of the SDNP should be assessed.</p>	<p>The effects of the onshore elements of the Proposed Development on the special landscape qualities of the SDNP have been summarised in Sections 18.11 – 18.13 of the Chapter, and assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p> <p>The visual assessment been assessed in detail in Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4)</p>
<p>Multiple stakeholders including (but not restricted to) Natural England and SDNPA.</p>	<p>No reference is made to the criteria for demonstrating exceptional circumstances justifying major development in the SDNP, including considerations of alternative locations.</p>	<p>The final onshore cable route was selected after assessment and consultation on several onshore cable route options.</p> <p>Further justification on development within the SDNP can be found within Section 3.3 of Chapter 3: Alternatives, Volume 3 of the ES (Document Reference: 6.2.3).</p>
<p>Multiple stakeholders including (but not restricted to) WSCC, Natural England and Horsham District Council.</p>	<p>Of particular concern are significant effects relating to the loss of trees and woodland. Stakeholders highlight the existing boundary vegetation along Bob Lane is crucial for screening both substations.</p>	<p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>An Outline LEMP (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats.</p> <p>The existing boundary vegetation along Bob Lane has been retained.</p>

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) Arun District Council and WSCC.	The effect of the Proposed Development interface with planned and known upcoming development on the landscape and visual impacts.	Cumulative effects of the onshore elements of the Proposed Development have been assessed in Section 18.14 .
Multiple stakeholders including (but not restricted to) Arun District Council, Horsham District Council, Natural England and SDNPA.	The Landscape Design Plan is required to clearly set out how the design planning will ensure the protection of landscape character, mitigation and the architectural strategy.	A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10) which includes all the elements requested by Natural England.
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	Due to the sensitivity of SDNP and concerns of the feasibility of reinstatement works an assessment after three and five years should be undertaken.	<p>The assessment has included effects at Year 1, Year 5 and Year 10, in agreement with stakeholders during consultation.</p> <p>An Outline LEMP (Document Reference: 7.10) has been developed to ensure all new planting is established within five years of the construction phase, and appropriate maintenance and management is carried out up to 10 years.</p>
Multiple stakeholders including (but not restricted to) Natural England and SDNPA.	Question whether the Study Area (2km either side of the temporary construction corridor) is sufficient in open downland.	Methodology setting out the rationale for the extent of the LVIA study area is reported in Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4 of the ES (Document Reference: 6.4.18.1)
Multiple stakeholders including (but not restricted to) SDNPA and Natural England.	The consideration of topography as a highly sensitive landscape feature.	Topography is a characteristic of landscape character. Effects on landscape character are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).

Stakeholder	Theme	How this is addressed in this ES
<p>Multiple stakeholders including (but not restricted to) SDNPA, Natural England and WSCC.</p>	<p>Further information is required to understand the methodology and viability of trenchless crossing techniques (such as HDD). With particular regards scarp slopes within the SDNP.</p>	<p>Trenchless crossings are a measure to reduce, as far as practical, the landscape and visual effects of the onshore cable corridor. This type of crossing has been used for much of the scarp slopes within the SDNP.</p> <p>Risk management measures with respect to trenchless crossing techniques are outlined in the Outline CoCP (Document Reference: 7.2) and Outline Construction Method Statement (Document Reference: 7.23)).</p> <p>Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4) notes that the DCO does not consent open trenching methods in areas where HDD is being proposed (should HDD fail additional consent would be required to deliver an alternative solution).</p>
<p>Multiple stakeholders including (but not restricted to) SDNPA and WSCC.</p>	<p>The assessment should consider intervisibility between onshore and offshore elements of the Proposed Development.</p>	<p>The intervisibility between the offshore and onshore elements of the Proposed Development has been included throughout the assessment in this Chapter.</p>
<p>Multiple stakeholders including (but not restricted to) WSCC and SDNPA.</p>	<p>The assessment of impacts on visual receptors should be broadened to include individual properties, community facilities and schools.</p>	<p>Settlements within the 2km study area and individual residential properties (within a study area of 1km) are assessed in Appendix 18.4: Visual assessment, Volume 4 of the ES (Document Reference: 6.4.18.4) and Appendix 18.5: Residential Visual Amenity Assessment, Volume 4 of the ES (Document Reference: 6.4.18.5) respectively.</p> <p>Community facilities and schools are assessed separately in Chapter 17: Socio-economics, Volume 2 of the ES (Document Reference: 6.2.17).</p>

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	Specific viewpoints should be refined and reconsidered where necessary.	Viewpoint locations have been revised and assessed as a result of route design evolution and feedback from statutory and targeted consultations in Oct/Nov 2022, Feb/Mar 2023 and April/May 2023. The viewpoint locations are illustrated in Figure 18.4a-e, Volume 3 of the ES (Document Reference: 6.3.18) and a viewpoint directory has been reported in Appendix 18.6: Viewpoint table, Volume 4 of the ES (Document Reference: 6.4.18.6).
Multiple stakeholders including (but not restricted to) Arun District Council, Horsham District Council, Mid Sussex District Council, Natural England, SDNPA and WSCC.	Details underpinning the principles of the design of the operational onshore substation should be provided as part of the ES.	A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10).
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	The Applicant should review the effectiveness of the Rampion 1 reinstatement techniques and demonstrate how lessons learned have been considered.	An Outline Code of Construction Practice (Document Reference: 7.2) and Outline LEMP (Document Reference: 7.10) have been developed to ensure the reinstatement and monitoring of landscape features and habitats. Further engagement has been undertaken with SDNPA and WSCC to review lessons learned from Rampion 1 on 27 April 2023.
Multiple stakeholders including (but not restricted to) WSCC and SDNPA.	Individual visual impacts on residential properties in proximity to the onshore substation sites should be assessed.	A Residential Visual Amenity Assessment has been included in Appendix 18.5: Residential Visual Amenity Assessment, Volume 4 of the ES (Document Reference: 6.4.18.5).

18.3.25 Following feedback to the first Statutory Consultation exercise in 2021 and after further analysis, it was identified that some coastal residents did not receive

consultation leaflets as intended. Therefore, the first Statutory Consultation was reopened between 7 February 2022 to 11 April 2022 for a further nine weeks. No feedback or comments were received from the reopened first Statutory consultation in relation to LVIA.

Second Statutory Consultation exercise – October to November 2022

- 18.3.26 The second Statutory Consultation exercise was undertaken from 18 October 2022 to 29 November 2022. This was a targeted consultation which focused on updates to the onshore cable route proposals which were being considered following feedback from consultation and further engineering and environmental works. As part of this second Statutory Consultation exercise, RED sought feedback on the potential changes to the onshore cable route proposals to inform the onshore design taken forward to DCO Application.
- 18.3.27 **Table 18-7** provides a summary of the key themes of the feedback received in the second Statutory Consultation exercise in 2022 in relation to LVIA and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the second Statutory Consultation exercise in 2022 and the responses to those comments is provided in the **Consultation Report** (Document Reference: 5.1).

Table 18-7 Second Statutory Consultation exercise (October – November 2022) feedback

Stakeholder	Theme	How this is addressed this ES
Multiple stakeholders including (but not restricted to) Natural England and SDNPA.	Concerns that the assessment of the impact of the Proposed Development on the special qualities of the SDNP underestimates the landscape effects which is compounded by a lack of baseline analysis.	The effects of the onshore cable corridor on the special landscape qualities of the SDNP have been summarised in Section 18.11 to 18.13, and assessed in detail in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) which includes a detail analysis of the baseline conditions reported in Section 18.6 .
Multiple stakeholders including (but not restricted to) Natural England and SDNPA.	The loss of tree belts and hedgerow trees as a result of the temporary cable corridor will diminish the	Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures

Stakeholder	Theme	How this is addressed this ES
	integrity of field boundaries, altering the landscape character of the SDNP.	<p>7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>An Outline LEMP (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats.</p> <p>Effects on landscape character within the SDNP are assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).</p>
Multiple stakeholders including (but not restricted to) Natural England and SDNPA.	Even where trenchless crossing techniques are used the SDNP would be impacted by construction activities.	The construction effects of the onshore cable corridor on the special landscape qualities of the SDNP have been summarised in Sections 18.11 - 18.13 and assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3). These effects are temporary and would last up to approximately 3.5 years.
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	<p>An Arboricultural Impact Assessment should provide clear criteria used to select trenchless crossing locations.</p> <p>This information should be incorporated to support the LVIA.</p>	<p>An AIA is provided in Appendix 22.16: Arboricultural Impact Assessment, Volume 4 of the ES (Document Reference: 6.4.22.16) which provides criteria used to select trenchless crossing locations, and this information supports the findings of the LVIA.</p> <p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p>
Multiple stakeholders including (but not restricted to) Horsham District Council and WSCC.	The nature of the alternative routes proposed may result in cumulative effects with offshore elements of the Proposed Development.	No alternative routes are proposed in the ES. Cumulative effects are summarised and assessed in Section 18.13 .

Stakeholder	Theme	How this is addressed this ES
Multiple stakeholders including (but not restricted to) Natural England and SDNPA.	Concerns that LVIA overstates the benefits of C-115 and clarity is required as to the extent of this mitigation measure. Concerns particularly relate to the success of hedgerow notching and re-planting particularly on chalk soils.	An Outline LEMP of the ES (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats. The maintenance period for the scheme extends up to 10 years. Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	A number of comments were received on the selection and refinement of viewpoints associated with the alternatives and modifications presented for consultation in the PEIR SIR (RED, 2022).	Viewpoint locations have been revised as a result of route design evolution and feedback from statutory and targeted consultations in Oct/Nov 2022, Feb/Mar 2023 and April/May 2023. The viewpoint locations are illustrated in Figure 18.4a-e, Volume 3 of the ES (Document Reference: 6.3.18) and a viewpoint directory has been reported in Appendix 18.6: Viewpoint table, Volume 4 of the ES (Document Reference: 6.4.18.6).
Multiple stakeholders including (but not restricted to) Natural England, SDNPA and WSCC.	Stakeholders advised that the Applicant review the effectiveness of the reinstatement of the Rampion 1 cable corridor.	An Outline Code of Construction Practice (Document Reference 7.2) and Outline LEMP (Document Reference 7.10) have been developed to ensure the reinstatement and monitoring of landscape features and habitats. The maintenance period for the scheme extends up to 10 years. Further engagement has been undertaken with SDNPA and WSCC to review lessons learned from Rampion 1 on 27 April 2023.

Third Statutory Consultation exercise – February to March 2023

- 18.3.28 The third Statutory Consultation exercise was undertaken from 24 February 2023 to 27 March 2023. This was a targeted consultation which focused on a further single onshore cable route alternative being considered following feedback from consultation and further engineering and environmental works. As part of this third Statutory Consultation exercise, RED sought feedback on the potential changes to the onshore cable route proposals to inform the onshore design taken forward to DCO Application.
- 18.3.29 **Table 18-8** provides a summary of the key themes of the feedback received in the third Statutory Consultation exercise in 2023 in relation to LVIA and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the third Statutory Consultation exercise in 2023 and the responses to those comments is provided in the **Consultation Report** (Document Reference: 5.1).

Table 18-8 Third Statutory Consultation exercise (February – March 2023) feedback

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) SDNPA and Natural England.	The assessment of effects on Special Landscape Qualities within SDNP should not moderate harm through a quantitative judgement on geographical extent and should instead assess whether SLQs will be harmed.	The effects of the onshore cable corridor on the special landscape qualities of the SDNP have been summarised in Sections 18.11 - 18.13 and assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3).
Multiple stakeholders including (but not restricted to) SDNPA and Natural England.	The cultural heritage of the landscape is an integral part of landscape character, therefore should be assessed in reference to the landscape character.	Historic Landscape Character has been acknowledged in the assessment of landscape character in Appendix 18.3: Landscape assessment, Volume 4 of the ES (Document Reference: 6.4.18.3) and this Chapter. Effects on Cultural Heritage and Historic Landscapes are assessed in Chapter 25: Historic environment, Volume 2 of the ES (Document Reference: 6.2.25).
Multiple stakeholders including (but not restricted to) SDNPA and	A concise baseline commentary on the special qualities of the SDNP to be crossed by the temporary construction corridor	The effects of the onshore cable corridor on the special landscape qualities of the SDNP have been summarised in Sections 18.11 – 18.13 , and assessed in Appendix 18.3: Landscape assessment, Volume 4 of the ES

Stakeholder	Theme	How this is addressed in this ES
Natural England.	during the construction period.	(Document Reference: 6.4.18.3) which includes a baseline analysis of the special landscape qualities.
Multiple stakeholders including (but not restricted to) SDNPA and Natural England.	<p>The landscape and visual effects of temporary fencing during construction should be assessed for the proposed locations for fencing within SDNP. The presence of fencing is not assessed in the A3: Arun to Adur Open Downs landscape character assessment where it has the potential to change this open downland landscape character.</p> <p>Any proposed permanent fencing during the operation and maintenance phase should also be assessed.</p>	<p>The landscape and visual effects of temporary fencing during construction is assessed as part of construction effects in the assessment including A3: Arun to Adur Open Downs. Permanent fencing is also assessed as part of the operation and maintenance phase.</p>
Multiple stakeholders including (but not restricted to) SDNPA, WSCC and Natural England.	<p>A preliminary Arboricultural Impact Assessment remains to be presented as evidence for the choice of open cut over trenchless crossings.</p>	<p>Arboriculture Surveys and Vegetation Retention Plans form part of the additional survey information that has informed the findings of the LVIA.</p> <p>An AIA is provided in Appendix 22.16: Arboricultural Impact Assessment, Volume 4 of the ES (Document Reference: 6.4.22.16).</p>
Multiple stakeholders including (but not restricted to) SDNPA, WSCC and Natural England.	<p>A lack of available evidence on the feasibility of C-115 and the ‘high’ success rates for reinstatement of hedgerows and trees. Failure of C-115 would result in significant severance of field boundaries harming the landscape character.</p>	<p>An Outline LEMP (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats. The maintenance period for the scheme extends up to 10 years. Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES</p>

Stakeholder	Theme	How this is addressed in this ES
<p>Multiple stakeholders including (but not restricted to) SDNPA and Natural England.</p>	<p>Further evidence is required on the viability of trenchless crossing (including HDD), particularly on steep slopes and chalk scarp. In event of HDD failure substantial areas of Ancient Woodland would be at threat of loss.</p>	<p>(Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>Trenchless crossings are a valuable form of mitigation, capable of reducing residual landscape and visual effects, as far as practical, and are included in the LVIA.</p> <p>Risk management measures with respect to trenchless crossing techniques are outlined in the Outline CoCP (Document Reference: 7.2) and Outline Construction Method Statement (Document Reference: 7.23)).</p> <p>Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4) notes that the DCO does not consent open trenching methods in areas where HDD is being proposed (should HDD fail additional consent would be required to deliver an alternative solution).</p>
<p>Multiple stakeholders including (but not restricted to) SDNPA and Natural England.</p>	<p>Additional viewpoints and refinements to existing viewpoints are proposed by stakeholders. Stakeholders advise that further micro-siting would be beneficial due to the panoramic nature of several views.</p>	<p>Viewpoint locations have been revised as a result of route design evolution and feedback from statutory and targeted consultations in Oct/Nov 2022, Feb/Mar 2023 and April/May 2023. The viewpoint locations for the final onshore cable route are illustrated in Figure 18.4a-e, Volume 3 of the ES (Document Reference: 6.3.18) and a viewpoint directory has been reported in Appendix 18.6: Viewpoint Directory, Volume 4 of the ES (Document Reference: 6.4.18.6).</p>

Fourth Statutory Consultation exercise – April to May 2023

- 18.3.30 The fourth Statutory Consultation exercise was undertaken from 28 April 2023 to 30 May 2023. This was a targeted consultation which focused on the proposed extension works to the existing National Grid Bolney substation to facilitate the connection of the Rampion 2 onshore cable route into the national grid electricity infrastructure. As part of this fourth Statutory Consultation exercise, RED sought feedback on the proposed substation extension works to inform the onshore design taken forward to the DCO Application.

- 18.3.31 **Table 18-9** provides a summary of the key themes of the feedback received in the fourth Statutory Consultation exercise in 2023 in relation to LVIA and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the fourth Statutory Consultation exercise in 2023 and the responses to those comments is provided in the **Consultation Report** (Document Reference: 5.1).
- 18.3.32 Further detail about the results of the non-statutory consultation exercise can be found in the **Consultation Report** (Document Reference: 5.1).

Table 18-9 Fourth Statutory Consultation exercise (April – May 2023) feedback

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) Horsham District Council and WSCC.	Noted that the Bolney substation extension crosses up to four field/land use boundaries and is in close proximity to existing field boundaries which include hedgerows, trees and woodland. Embedded environmental measures will be applied to reduced loss of vegetation and habitat.	Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2). A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10).
Multiple stakeholders including (but not restricted to) Horsham District Council.	Views of the Bolney substation extension works are likely to be visible from public footpath 34Bo. Enhancement planting to the existing vegetation should be secured to mitigate this. Views are also likely from Bob Lane, planting to connect the existing tree belt to the westerly woodland block should be secured.	Visual effects from 34Bo public footpath and Bob Lane have been included in the assessment. Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2). An Outline LEMP (Document Reference: 7.10) has been developed to ensure the reinstatement of landscape features and habitats. The maintenance period for the scheme extends to 10 years.

Stakeholder	Theme	How this is addressed in this ES
<p>Multiple stakeholders including (but not restricted to) Horsham District Council and WSCC.</p>	<p>The Bolney substation extension proposals have the potential to increase impacts on arboricultural receptors.</p>	<p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10).</p>
<p>Multiple stakeholders including (but not restricted to) Horsham District Council and WSCC.</p>	<p>The Bolney substation extension proposal would likely result in further woodland and hedgerow disconnections to those experienced as a result of the creation of Bolney substation and extensions relating to Rampion 1.</p>	<p>Landscape features or elements (principally hedgerows / trees woodland) that may be lost or retained during construction are documented in Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) and indicated in Figures 7.2.1- 7.2.3 of the Outline Code of Construction Practice (Document Reference: 7.2).</p> <p>A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10).</p>
<p>Multiple stakeholders including (but not restricted to) Horsham District Council and WSCC.</p>	<p>Landscaping plans required to mitigate, screen and enhance should incorporate existing surrounding woodland and hedgerow features.</p>	<p>A Landscape Design Plan and Strategy for the onshore substation has been developed and presented as part of the Outline LEMP (Document Reference: 7.10).</p>

18.4 Scope of the assessment

Overview

- 18.4.1 This section sets out the scope of the ES assessment for landscape and visual impact. This scope has been developed as Rampion 2 design has evolved and responds to feedback received to-date as set out in **Section 18.3**.

Spatial scope and Study Area

- 18.4.2 The Study Area for the LVIA is illustrated in **Figure 18.1, Volume 3** of the ES (Document Reference: 6.3.18) and extends to a 2km buffer beyond the centre of the proposed DCO Order Limits (based on the same principles as the PEIR Assessment Boundary in the PEIR (RED, 2021), updated to account for further evolution of the design of the Proposed Development), and is supported by a number of elevated, long-distance panoramic viewpoint locations within the wider landscape, beyond 2km, as agreed with stakeholders, in particular with the SDNPA to demonstrate any visibility at these distances.
- 18.4.3 IEMA Guidance (IEMA, 2015 and 2017) recommends a proportionate assessment focused on the likely significant effects of a development, and a proportionate aspect chapter. The LVIA Study Area must therefore be large enough to capture all likely significant effects. However, an overly large LVIA Study Area may be considered disproportionate if it makes understanding the key impacts of the development more difficult by including extraneous baseline information, and hence receptors which are unlikely to be significantly affected by the Proposed Development.
- 18.4.4 This is supported by the Landscape Institute (GLVIA3) (Landscape Institute & IEMA, 2013) (paragraph 3.16) which recommends that “*The level of detail provided should be that which is reasonably required to assess the likely significant effects*”. Paragraph 5.2 also states that “*The study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner*”.
- 18.4.5 The assessment has been guided by detailed viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) which indicates that significant effects (during the construction phase only) will be contained well within the 2km Study Area.
- 18.4.6 The LVIA Study Area therefore defines a limit, based on professional judgement, beyond which it is considered unlikely for significant effects to arise. This judgement of up to 2km is based on a detailed analysis of the Zone of Theoretical Visibility (ZTV) (**Figures 18.2 – 18.4a-c, Volume 3** of the ES (Document Reference: 6.3.18)); site surveys to establish an understanding of the local landscape character; the scale of the construction and development proposed; detailed viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) and knowledge of similar projects including East Anglia TWO and THREE, Rampion 1, Norfolk Vanguard and Thanet Extension offshore wind farms.

Temporal scope

- 18.4.7 The temporal scope of the assessment of the LVIA is the entire lifetime of Rampion 2 which therefore covers the construction, operation and maintenance and decommissioning phases, as follows:
- **construction phase** (landfall, onshore temporary cable corridor and onshore substations) – up to three years and six months in respect of the landfall and onshore cable corridor including use of construction compounds, and four years for the onshore substations (all defined in the assessment methodology as ‘short term’);
 - **operation and maintenance phase** (onshore Oakendene substation and existing National Grid substation extension) – around 30 years (defined in the assessment methodology as ‘long term’) and residual effects along the onshore cable corridor as a result of vegetation unavoidably removed along the onshore cable corridor – up to 10 years (medium term); and
 - **decommissioning phase** (onshore Oakendene substation and existing National Grid substation extension) – up to four years (short term).
- 18.4.8 During the decommissioning phase, it is anticipated that the onshore electrical cables will be left in-situ with ends cut, sealed and buried to minimise landscape and visual effects associated with removal. The decommissioning phase has therefore been scoped out of the assessment of the onshore cable corridor as the cables will be left in-situ at the end of the operation and maintenance phase and there will be no landscape or visual effects.
- 18.4.9 During the decommissioning phase, the onshore Oakendene substation may be used as a substation site after decommissioning of the Proposed Development or it may be upgraded for use by another offshore wind project. This would be subject to a separate planning application.
- 18.4.10 Should the onshore Oakendene substation need to be decommissioned fully, the decommissioning works are likely to be undertaken in reverse to the sequence of construction works and involve similar levels of equipment. All relevant sites will be restored to their original states or made suitable for an alternative use, subject to the relevant consents.
- 18.4.11 The extension to National Grid Bolney substation will be owned by National Grid and will form part of the UK transmission network. It may be used for repowers or new connections after decommissioning of the Proposed Development. If it is decommissioned the extension area will be returned to its original state or made suitable for an alternative use.
- 18.4.12 The assessment has therefore assumed that the onshore Oakendene substation and extension to the existing National Grid substation will be decommissioned after the operation and maintenance phase.

Potential receptors

- 18.4.13 The spatial and temporal scope of the assessment enables the identification of receptors which may experience a change as a result of Rampion 2. The types of

receptors identified that may experience likely significant landscape and visual effects are outlined in **Table 18-10**.

Table 18-10 Receptors requiring assessment for the LVIA

Receptor group	Receptors included within group
Landscape Receptors	<ul style="list-style-type: none"> • Landscape elements (within the proposed DCO Order Limits) includes vegetation / landcover such as trees, woodland, hedges, scrub and grassland / crops that contribute to the landscape character. • Landscape Character – National, County and Local Landscape Character Areas (LCAs). The assessment has focused on the LCAs and includes reference to their key characteristics, historic landscapes, and perceptual qualities. • Landscape Designations – SDNP and High Weald AONB. The assessment includes reference to the statutory duties attached to national landscape designations and their special qualities.
Visual Receptors	<ul style="list-style-type: none"> • Settlements. In addition, a Residential Visual Amenity Assessment is provided in Appendix 18.5: Residential Visual Amenity Assessment, Volume 4 of the ES [APP-171]. • Transport routes (roads and rail). • Recreational routes (including Public Rights of Way (PRoW), National Trails, Sustrans Cycle Routes and other long-distance walking and cycling routes). • Outdoor recreational and tourist destinations that involve an appreciation of the landscape.

Zone of Theoretical Visibility (ZTV)

Overview

- 18.4.14 The Zone of Theoretical Visibility (ZTV) and viewpoint analysis is used to further define the scope of the assessment process. In particular, a significance threshold indicating the distance from the onshore elements of the Proposed Development, where significant effects may be likely, has been identified through the viewpoint assessment set out in **Appendix 18.2, Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2). This has been used to focus the baseline information and detailed reporting of the assessment in this chapter.
- 18.4.15 The ZTVs in **Figures 18.2 – 18.4a-e, Volume 3** of the ES (Document Reference: 6.3.18) are calculated using ArcGIS and Resoft Wind Farm© softwares to

generate the zone of theoretical visibility of the onshore elements of the Proposed Development. These software's create a 3D computer model of the existing landscape and the development using 2m LIDAR data with gaps filled with 1m LIDAR and 50cm Bluesky Digital Surface Model (DSM) within 5km. The DSM has been combined with the 3D computer model to achieve a ground level Above Ordnance Datum (AOD) for the onshore substation at Oakendene and the existing National Grid Bolney substation extension, which does not require material to be exported from or imported to either of these the sites as set out in the design principle SA4 within the **DAS [REP3-013]**.

18.4.16 The following maximum assessment assumptions have been used to define the ZTV (extracted from **Table 18-24**):

- **Onshore substation at Oakendene:** Onshore substation site boundary x 12.5m maximum building height based on a base level of 16.25m AOD;
- **Existing National Grid Bolney substation extension (Air Insulated Substation (AIS) option):** Onshore existing National Grid Bolney substation extension site boundary x 3m maximum building height and 12m maximum height of other infrastructure (busbars) based on a base level of 32.625m AOD;
- **Existing National Grid Bolney substation extension (Gas Insulated Substation (GIS) option):** Onshore substation extension boundary x 12m maximum building height based on a base level of 32.625m AOD; and
- **Onshore cable corridor:** centreline of proposed DCO order limit x 6m AOD maximum construction vehicle height.
- **Temporary Construction Compounds:**
 - ▶ **Climping Compound:** to allow for temporary construction compound boundary x 7m AOD maximum construction vehicle height and up to 20m maximum height AOD for cement bound sand batching plant;
 - ▶ **Washington Compound:** to allow for temporary construction compound boundary x 7m AOD maximum construction vehicle height and up to 20m AOD maximum height for cement bound sand batching plant;
 - ▶ **Oakendene Substation Compound:** to allow for temporary construction compound boundary x 7m AOD maximum construction vehicle height and up to 20m AOD maximum height for concrete batching plant;
 - ▶ **Oakendene West Compound:** to allow for temporary construction compound boundary x 7m AOD maximum construction vehicle height and up to 20m AOD maximum height for cement bound sand batching plant; and
 - ▶ **Existing National Grid Bolney Substation Compound:** to allow for temporary construction compound boundary x 7m AOD maximum construction vehicle height and up to 20m AOD maximum height for concrete batching plant;

18.4.17 The ZTVs also include an adjustment that allows for the Curvature and Light Refraction of the Earth. The ZTVs have not allowed for mobile cranes (44m fully extended) which will be involved only periodically in the construction of the onshore Oakendene substation and the existing National Grid Bolney substation extension. The lightning protection mast (18m height) has not been included in the

ZTV due to its low visibility and unlikely potential for significant visual effect. It has however been modelled on the photomontages.

- 18.4.18 The ZTVs do not indicate the decrease in scale that occurs with increased distance from the temporary construction works or operation and maintenance of the onshore Oakendene substation site and existing National Grid Bolney substation extension or the construction works associated with the onshore cable corridor.
- 18.4.19 Areas of existing woodland have been masked out (vector source) to compensate for limitations in the ZTV production process. Note that this does not include individual trees, hedgerows, roadside vegetation and treebelts / smaller groups of trees which collectively provide successive layers of vegetation screening within the LVIA Study Area.
- 18.4.20 The resulting ZTV plots are overlaid on Ordnance Survey mapping at an appropriate scale and presented as figures using desktop publishing/graphic design software.

ZTV: Onshore substation at Oakendene

- 18.4.21 A ZTV for the onshore substation site at Oakendene during operation is illustrated in **Figure 18.2a, Volume 3** of the ES (Document Reference: 6.3.18). The ZTV pattern for the onshore substation at Oakendene is very limited and reflects the underlying landform within the 2km LVIA Study Area and the total ZTV coverage accounts for 6.36% of the LVIA Study Area¹. This percentage will further reduce if all existing vegetation and built-form were included as well as the proposed planting which forms part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) together with the **Outline LEMP** (Document Reference: 7.10).
- 18.4.22 The onshore substation at Oakendene is bounded on all sides by a mixture of mature trees, hedgerows and woodland which follow field boundaries and road corridors and in practice limits the theoretical visibility to within one to two field boundaries from the edge of the substation boundary. The field boundary to the south of Oakendene Manor is however more open. Similarly, the northern field boundary along the A272 is bounded by a lower hedge and trees which offer some theoretical visibility into the area covered by the proposed DCO Order Limits, although the onshore Oakendene substation site is set well back from the road. Further north, theoretical visibility is limited by roadside vegetation along the northern side of the A272 and by successive field boundary / vegetation / further woodland and undulating ridges at Barnfield Park and Kings Hill and at North Farm to the north at approximately 1-1.5km distance. Whilst the ZTV indicates some limited theoretical visibility within 2km, site surveys have revealed limited to no visibility from these areas with only the upper parts of existing pylons visible.
- 18.4.23 From within 500m of the onshore substation, theoretical visibility is limited to the east around Southland Farm, to the north of Taintfield Wood in the south, and to the south of Oakendene Manor to the west. In particular views across to Oakendene Manor are visible from Viewpoints SA3 **Figure 18.12a-j Volume 3** of

¹ The DCO submission (2023) incorrectly recorded 7.9%.

the ES (Document Reference: 6.3.18) and SA7 **Figure 18.13a-h, Volume 3** of the ES (Document Reference: 6.3.18).

- 18.4.24 To the east and south, theoretical visibility is limited with rising ground at approximately 1km distance at Nyeshill Farm and The Hatch. In reality short-range visibility from Kent Street is largely restricted by tall and mature roadside vegetation (including mature trees) and from the ridge to the south at Westridge Farm due to intervening successive vegetated field boundaries.
- 18.4.25 Theoretical visibility is more extensive to the southwest, extending approximately 2-3km distance. In reality, much of this area is subject to screening from successive layers of intervening trees, hedgerows and woodland along roads and field boundaries. To the west, visibility is restricted to the built-up edge of Cowfold and more immediately by buildings and vegetation at Oakendene Industrial Estate.
- 18.4.26 **Figure 18.2b, Volume 3** of the ES (Document Reference: 6.3.18) illustrates the theoretical visibility during the construction phase of the substation and account for the onshore cable corridor and trenchless crossing construction compounds. This should be read with **Figure 18.2c, Volume 3** of the ES (Document Reference: 6.3.18) which illustrates the theoretical visibility during the construction phase of Oakendene West and Oakendene construction compounds. During the construction period there is an increase in the extent of the ZTV indicating an increase in the theoretical visibility. Much of this is however restricted to within 1km and will further reduce if all existing vegetation and built-form were included.

ZTV: Existing National Grid Bolney substation extension (AIS Option)

- 18.4.27 The ZTV pattern during operation for the existing National Grid Bolney substation extension (AIS option) is illustrated in **Figure 18.3a, Volume 3** of the ES (Document Reference: 6.3.18). The pattern of ZTV coverage reflects the underlying landform and is limited to 7.58% of the LVIA Study Area. This percentage will further reduce if all existing vegetation and built-form were included as well as the proposed planting which forms part of **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) and **Outline LEMP** (Document Reference: 7.10).
- 18.4.28 Much of the theoretical visibility is limited to within 250-500m distance from the existing National Grid Bolney substation extension site boundary (AIS) or within one to two field boundaries. This area largely overlaps with the existing National Grid Bolney substation and the Rampion 1 onshore substation and the fields that immediately surround these developments.
- 18.4.29 Beyond this immediate area, fragmented visibility extends to the north to Dawe's Farm and Coombe House but is restricted by the low intervening ridge and successive layers of intervening trees, hedgerows and woodland. A further area of fragmented theoretical visibility extends to the south to Twineham Grange but in reality this is also restricted by successive layers of intervening trees, hedgerows and woodland.
- 18.4.30 **Figure 18.3c, Volume 3** of the ES (Document Reference: 6.3.18) illustrates the theoretical visibility during the construction phase of the substation extension and accounts for the temporary construction compound at Bolney as well as the GIS /

AIS options for the onshore Bolney substation extension. During the construction period there is an increase in the extent of the ZTV indicating an increase in the theoretical visibility. Much of this is however restricted by woodland within and close to the existing Bolney substation.

ZTV: Existing National Grid Bolney substation extension (GIS Option)

- 18.4.31 The ZTV pattern during operation for the existing National Grid Bolney substation extension (GIS option) is illustrated in **Figure 18.3b, Volume 3** of the ES (Document Reference: 6.3.18) and is much reduced with the total ZTV coverage accounting for 6.83%² of the LVIA Study Area. The theoretical visibility is limited to within 250-500m distance from the existing National Grid Bolney substation site boundary (GIS) or within one to two field boundaries. This area largely overlaps with the visual envelope for the existing Bolney substation and the Rampion 1 onshore substation. There is very limited fragmented theoretical visibility beyond this.
- 18.4.32 The percentage of ZTV coverage will further reduce if all existing vegetation and built-form were included as well as the proposed planting which forms part of the **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) together with the **Outline LEMP** (Document Reference: 7.10).
- 18.4.33 As noted previously, **Figure 18.3c, Volume 3** of the ES (Document Reference: 6.3.18) illustrates the theoretical visibility during the construction phase of the substation extension and accounts for the temporary construction compound at Bolney as well as the GIS / AIS options for the onshore Existing National Grid Bolney substation extension.

ZTV: Onshore cable corridor

- 18.4.34 The ZTV pattern for the onshore cable corridor is illustrated in **Figures 18.4a-c, Volume 3** of the ES (Document Reference: 6.3.18). The ZTV pattern for the construction works of the approximately 38.8km long onshore cable corridor (including the temporary construction compounds) reflects the underlying landform within the 2km LVIA Study Area and the total ZTV coverage accounts for 41.5% of the LVIA Study Area.
- 18.4.35 Much of the theoretical visibility is contained within 1-2km of the onshore cable corridor with fragmented visibility with patches or fragmented theoretical visibility indicated beyond this. In practice, site surveys have indicated that in most cases the significant visual effects will be limited to 1-2 field boundaries from the onshore cable corridor, extending out to up to 1km with the open areas of the South Downs within the SDNP.
- 18.4.36 **Figures 18.3d-e, Volume 3** of the ES (Document Reference: 6.3.18) illustrates the theoretical visibility during the construction phase of the temporary construction compounds at Climping and Washington respectfully.

² The DCO submission (2023) incorrectly recorded 8.4% and 3.9% on Figure 18.3b.

- 18.4.37 The ZTV pattern for the Climping Construction Compound is largely contained by the River Arun valley, with the ZTV coverage extending north to south across the flood plain and will further reduce if all existing vegetation and built-form were included.
- 18.4.38 The ZTV pattern for the Washington Construction Compound is largely contained to within 1km and will further reduce if all existing vegetation and built-form were included. Further theoretical visibility extends to the south over the northern slopes of the chalk escarpment within the SDNP by the River Arun valley, with the ZTV coverage extending north to south across the flood plain.

Viewpoint selection

- 18.4.39 Viewpoints have been selected to cover a range of receptor locations, taking account of the following assessment assumptions:
- a range of viewpoints from where there are likely to be significant effects;
 - those representative of views within the 2km LVIA Study Area and from specific viewpoints (including some elevated, distant viewpoints beyond 2km within the SDNP and High Weald AONB);
 - key landscape and visual receptors and different local authority areas;
 - utilisation of a number of relevant viewpoint locations from the LVIA completed as part of the existing Rampion 1 project;
 - a range of distances; and
 - an integrated approach representing several aspects from same location.
- 18.4.40 Viewpoints are selected from the ZTVs within the LVIA Study Area. These locations are then 'ground truthed' on site. For the avoidance of doubt, if an area on the map is shown to be outwith the ZTV then there will be **no view** of the onshore elements of the Proposed Development from that location.
- 18.4.41 With regards to the viewpoint locations, the following may be noted:
- The NatureScot (former Scottish Natural Heritage) guidance (2017) recognises *"the need to limit the list of viewpoints to a reasonable number"*;
 - over-provision of viewpoints *"can be as unhelpful as under-provision" and 'may distract attention from where impacts may be significant"*;
 - an appropriate balance must be struck through the LVIA consultation process to agree a proportionate number of viewpoints;
 - not all receptors require a viewpoint – receptors are still assessed and may refer to representative viewpoints; and
 - not all viewpoints require a photomontage – construction works and / or distant viewpoints with no significant effects may be better illustrated by an annotated photograph only.
- 18.4.42 Numerous viewpoint locations have been discussed and agreed with a number of stakeholders including South Downs National Park Authority, West Sussex County

Council, Natural England, High Weald AONB and Horsham District Council, outlined in **Section 18.3** and are listed in **Appendix 18.6: Viewpoint directory, Volume 4** of the ES (Document Reference: 6.4.18.6) which includes an inventory of all of the viewpoints assessed as part of the LVIA. This includes those which have been deleted or relocated through the stakeholder engagement.

- 18.4.43 A list of the viewpoints used to assist the LVIA is set out in **Table 18-11 to Table 18-13**.
- 18.4.44 **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) provides a complete viewpoint analysis of all 78 viewpoints which have been retained as part of the LVIA. This includes 64 viewpoint locations for the onshore cable corridor, including sequential viewpoints for the South Downs Way, ten viewpoint locations for the onshore substation at Oakendene, and four viewpoint locations for the existing National Grid Bolney substation extension. The viewpoint locations for the onshore cable corridor including sequential viewpoints for the South Downs Way which have been supplemented by additional 3D wirelines. The viewpoint analysis presented in **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) is used to assist the LVIA of receptor locations reported in this chapter.

Table 18-11 Onshore substation at Oakendene viewpoints

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.10, Volume 3 of the ES (Document Reference: 6.3.18)	SA1: Kent Street	Illustrative – road users. Partial views are likely, subject to perimeter vegetation screening.
Figure 18.11, Volume 3 of the ES (Document Reference: 6.3.18)	SA2: A272	Illustrative – road users. Partial views are likely, subject to perimeter vegetation screening.
Figure 18.12, Volume 3 of the ES (Document Reference: 6.3.18)	SA3: PRoW 1786, Taintfield Wood	Illustrative – footpath users. Open views across the onshore substation at Oakendene are possible from elevated location to the south.
Figure 18.13, Volume 3 of the ES (Document Reference: 6.3.18)	SA7: PRoW 1788 southwest of Site, west of Taintfield Wood	Illustrative – footpath users. Open views across the onshore Oakendene substation site (and temporary construction compound) are possible from this elevated location to the south.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Reference: 6.3.18)		
Figure 18.14, Volume 3 of the ES (Document Reference: 6.3.18)	SA8: PRow 1789 north of Eastridge Farm	Illustrative – footpath users. Little to no visibility of the onshore Oakendene substation site due to vegetation screening. However, there may be views during construction of the onshore cable corridor.
Figure 18.14.1, Volume 3 of the ES [REP4-027]	SA9: A272 Site Entrance	Specific – located at site access to show views experienced by road users at this point. Partial views are likely, subject to perimeter vegetation screening and fencing / gate.
Figure 18.14.2, Volume 3 of the ES [REP4-027]	SA10: Edge of Oakendene Manor near garden fence	Illustrative – residents. Illustrates visibility of the onshore Oakendene substation site just beyond garden fence and garden vegetation.
Figure 18.14.3, Volume 3 of the ES [REP4-027]	SA11: Patio area at Oakendene Manor	Specific – residents. Located on patio to show views experienced at this point. Partial views are likely, subject to garden vegetation and trees / hedgerows beyond.
Figure 18.14.4, Volume 3 of the ES [REP4-027]	SA12: PRow 1787 south of Site at gap in hedge	Specific – footpath users. Located at gap in hedge / field access to show views experienced at this point. Open views across the onshore substation site at Oakendene are possible from elevated location to the south.
Figure 18.14.5, Volume 3 of the ES [REP4-027]	SA13: PRow 1786 southwest of Site near lake	Specific – footpath users. Located at gap in hedge / field access to show views experienced at this point. Open views of the onshore substation site at Oakendene are possible from this location to the southwest.

Table 18-12 Existing National Grid Bolney substation extension (AIS / GIS) viewpoints

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.15, Volume 3 of the ES (Document Reference: 6.3.18)	SB1: PRoW 34B south of Coombe House	Representative – footpath users on PRoW T1 and 34Bo. Partial views are likely, subject to perimeter vegetation screening.
Figure 18.16, Volume 3 of the ES (Document Reference: 6.3.18)	SB3: Wineham Lane	Illustrative – footpath users and road users. Open view of onshore cable corridor and trenchless crossing construction compound and possible views of the existing National Grid Bolney substation extension and temporary construction compound
Figure 18.17, Volume 3 of the ES (Document Reference: 6.3.18)	SB6: PRoW 8T	Illustrative – footpath users. Open views into the existing National Grid Bolney substation extension and onshore cable corridor.
Figure 18.18, Volume 3 of the ES (Document Reference: 6.3.18)	SB7: Bob Lane	Illustrative of road users of Bob Lane.

Table 18-13 Onshore cable corridor viewpoints

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.19, Volume 3 of the ES (Document Reference: 6.3.18)	A: PRoW 829 Climping Beach	Illustrative – walkers, visitors, footpath users and residents. First opportunity to view onshore cable corridor from open coastal area with open views inland and out to sea.
Figure 18.20, Volume 3 of the ES	B: PRoW 168, Climping Caravan Park	Illustrative – walkers, local residents and caravan park users. Viewpoint located on open footpath and able to view across the Arundel Valley in

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
(Document Reference: 6.3.18)		comparison to roadside and resident- based receptors which are screened by existing tree cover.
Figure 18.21, Volume 3 of the ES (Document Reference: 6.3.18)	B1: Church Lane, Climping	Specific – road users, local residents and footpath users. Partial views of temporary construction compound. No visibility of onshore cable corridor.
Figure 18.22, Volume 3 of the ES (Document Reference: 6.3.18)	C: A259, Littlehampton	Specific – road users. Specific viewpoint located on the A259 bridge over the railway providing a glimpsed, elevated view over the Arundel Valley and the proposed river crossing point.
Figure 18.23, Volume 3 of the ES (Document Reference: 6.3.18)	C1: Benjamin Grey Drive, Littlehampton	Illustrative – residents. Partial views of part of the onshore cable corridor along the River Arun.
Figure 18.24, Volume 3 of the ES (Document Reference: 6.3.18)	D: Ford Road, near Tortington	Specific – road users. The viewpoint represents an open / glimpsed and relatively long-range view from the road across the Arundel Valley, taking in Arundel Castle and the urban edge of Littlehampton as well as part of the onshore cable corridor. Other receptor locations along this road and at residential properties are screened. Views from the riverside although open are experienced by fewer receptors.
Figure 18.25, Volume 3 of the ES (Document Reference: 6.3.18)	E: Arundel Castle (The Keep)	Specific – visitors. Located within the SDNP. The viewpoint is at the highest, publicly accessible point on the castle (The Keep), viewing across the Arundel Valley and is a view that large numbers of tourists will experience.
Figure 18.26, Volume 3 of the ES (Document Reference: 6.3.18)	E1a: Arundel Park	Specific – visitors and walkers. Located within the SDNP. The viewpoint is sited at the trig point within Arundel Park viewing across the Arundel Valley and into the South Downs hills above Wepham.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.27, Volume 3 of the ES (Document Reference: 6.3.18)	E1b: PRoW 2266 near Offham Farm, Arundel	Illustrative – walkers. Located within the SDNP. The Views across the Arundel Valley and into the South Downs hills above Wepham.
Figure 18.28, Volume 3 of the ES (Document Reference: 6.3.18)	F1: PRoW 2191-2, Barpham Hill	Illustrative - walkers. Located within the SDNP to the south of the onshore cable corridor viewing north from the hill / hillside potentially able to view north and south as well as across the onshore cable corridor.
Figure 18.28, Volume 3 of the ES [REP4-028]	F1a: PRoW 2191-2, Barpham Hill	Illustrative - walkers. Located within the SDNP to the south of the onshore cable corridor viewing north from the hill / hillside potentially able to view north and south as well as across the onshore cable corridor.
Figure 18.29, Volume 3 of the ES (Document Reference: 6.3.18)	F3: PRoW 2173 North of Blackpatch Hill Use F3R	Illustrative – walkers. Located within the SDNP on PRoW 2173 to the north of Blackpatch Hill approximately 1km south of the onshore cable corridor.
Figure 18.30, Volume 3 of the ES (Document Reference: 6.3.18)	G: Chantry Hill	Specific – walkers. Located on the South Downs Way (SDW) within the SDNP at a footpath junction with long views from the edge of the chalk escarpment. This location is also identified as a landmark viewpoint in the Land Use Consultants (2015) South Downs National Park View Characterisation and Analysis (Viewshed Study Report). Additional sequential views along the route of the SDW are also proposed, as follows: G1-2: Barnfarm Hill; G3: Springhead Hill; G4: Rackham Hill; and G5: Amberly Mount.
Figure 18.76, Volume 3 of the ES [REP4-030]	G2: Barnsfarm Hill	Illustrative – footpath users. Part of a series of sequential viewpoints along the South Downs Way.
Figure 18.76, Volume 3 of the ES	G3: Springhead Hill	Illustrative – footpath users. Part of a series of sequential viewpoints along the South Downs Way.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
the ES [REP4-030]		
Figure 18.76, Volume 3 of the ES [REP4-030]	G4: Rackham Hill	Illustrative – footpath users. Part of a series of sequential viewpoints along the South Downs Way.
Figure 18.76, Volume 3 of the ES [REP4-030]	G5: Amberly Mount	Illustrative – footpath users. Part of a series of sequential viewpoints along the South Downs Way.
Figure 18.31, Volume 3 of the ES (Document Reference: 6.3.18)	H: Washington	Illustrative – residents. Located within the SDNP on London Road viewing west, north and east from the northeast of the settlement edge across open space with community uses.
Figure 18.32, Volume 3 of the ES (Document Reference: 6.3.18)	H1: Junction of The Pike and A283, Washington	Specific – road users. Located on the edge of the SDNP at the junction of The Pike and the A283 with partial views towards the temporary construction compound along the onshore cable corridor.
Figure 18.33, Volume 3 of the ES (Application Reference: 6.3.18)	H1a. A248 Lyminster Road/footpath northeast corner of Brookside Caravan Park	Illustrative of open view experienced by walkers.
Figure 18.34, Volume 3 of the ES (Document Reference: 6.3.18)	H1c. Footpath south of Lyminster Nursery Caravan & Motorhome Site	Representative view experienced by road users/walkers.
Figure 18.35, Volume 3 of the ES (Document Reference: 6.3.18)	H1e. A248 Lyminster Road on corner NE of Lyminster	Representative view experienced by walkers / residents. Relocated to PRow 2202/1 north of Calceto Lane.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.36, Volume 3 of the ES (Document Reference: 6.3.18)	H2a. Minor road off Poling Street leading to Westlands Copse	Representative view experienced by road users/residents. Relocated to top of footpath PRow 2200 as a result of consultation.
Figure 18.37, Volume 3 of the ES (Document Reference: 6.3.18)	H2b. Bridleway junction west of Polling	Representative view experienced by walkers and horse riders.
Figure 18.38, Volume 3 of the ES (Document Reference: 6.3.18)	H2c. west of Decoy Wood	Representative view experienced by walkers.
Figure 18.39, Volume 3 of the ES (Document Reference: 6.3.18)	H3a. Footpath near New Place Farm	Representative view experienced by walkers.
Figure 18.40, Volume 3 of the ES (Document Reference: 6.3.18)	H5a. Footpath off Swillage Lane	Representative view experienced by road users/walkers.
Figure 18.41, Volume 3 of the ES (Document Reference: 6.3.18)	H6a. Footpath south of Angmering Park Stud Farm	Representative view experienced by walkers.
Figure 18.42, Volume 3 of the ES (Document Reference: 6.3.18)	H7a. Michelgrove on Monarch's Way	Representative view experienced by walkers/residents.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.43, Volume 3 of the ES (Document Reference: 6.3.18)	H7b. Harrow Hill bridleway	Representative view experienced by walkers and horse riders.
Figure 18.44, Volume 3 of the ES (Document Reference: 6.3.18)	H7c. Upper Bapham bridleway	Representative view experienced by walkers/horse riders and residents.
Figure 18.45, Volume 3 of the ES (Document Reference: 6.3.18)	H7d. Blackpatch Hill bridleway	Representative view experienced by walkers and horse riders. The view is illustrated from both Blackpatch Hill summit and the bridleway.
Figure 18.46, Volume 3 of the ES (Document Reference: 6.3.18)	H7f. New Barn/New Buildings	Representative view experienced by residents.
Figure 18.47, Volume 3 of the ES (Document Reference: 6.3.18)	H7g. Byway at Highden Beeches north of Cobden Farm	Representative view experienced by walkers and horse riders/others on the Byway.
Figure 18.48, Volume 3 of the ES (Document Reference: 6.3.18)	H7h. Barnsfarm Hill, South Downs Way	Representative view experienced by walkers.
Figure 18.49, Volume 3 of the ES (Document Reference: 6.3.18)	I: Chanctonbury Ring /Hill	Representative view experienced by walkers.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.76, Volume 3 of the ES [REP4-030]	Ia: Chanctonbury Ring /Hill	Illustrative – footpath users. Part of a series of sequential viewpoints along the South Downs Way.
Figure 18.50, Volume 3 of the ES (Document Reference: 6.3.18)	J1: PRoW 2709 at All Saints Church, Wiston	Representative view experienced by walkers.
Figure 18.51, Volume 3 of the ES (Document Reference: 6.3.18)	J2: PRoW 2617 west of Abbots Farm	Representative view experienced by walkers.
Figure 18.52, Volume 3 of the ES (Document Reference: 6.3.18)	J4: A283 at Lower Chancton Farm	Illustrative view experienced by walkers and residents.
Figure 18.53, Volume 3 of the ES (Document Reference: 6.3.18)	J5: PRoW 2604 Upper Chancton Farm	Illustrative – footpath users. Located on a PRoW south of Upper Chancton Farm viewing south towards the temporary construction compound. No visibility of the onshore cable corridor.
Figure 18.54, Volume 3 of the ES (Document Reference: 6.3.18)	K: PRoW 2519 at Ashurst	Illustrative – walkers and residents. Located on a PRoW east of the edge of Ashurst viewing back towards the settlement across the onshore cable corridor to the north and south.
Figure 18.55, Volume 3 of the ES (Document Reference: 6.3.18)	K1: PRoW 2594 near College Wood	Illustrative – walkers and residents. Located on a PRoW south of Spithandle Lane towards College Wood Farm.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.56, Volume 3 of the ES (Document Reference: 6.3.18)	L: Downs Link between Henfield and Partridge Green	Illustrative – walkers. The viewpoint is located on an open stretch of the multi-use National Cycle Route 223 and Downs Link near Brightham’s Farm, avoiding cuttings and well wooded sections of the onshore cable corridor.
Figure 18.57, Volume 3 of the ES (Document Reference: 6.3.18)	M: High Weald, Landscape Trail (near Bolney)	Illustrative – walkers, visitors and cyclists. The aim of this viewpoint is to provide a location within the High Weald AONB to the northeast of the onshore elements of Proposed Development. Much of this area is well wooded and views tended to be short range and channelled along roads / PRow and the ZTV is also fragmented. The viewpoint is located at the gap in a hedge close to the junction of two PRowS that allows an elevated view over the landscape to the southwest.
Figure 18.58, Volume 3 of the ES (Document Reference: 6.3.18)	N: Devil’s Dyke	<p>Specific – walkers and visitors. Located beyond 5km from the onshore cable corridor within the SDNP. This location is identified as a landmark viewpoint in the Land Use Consultants (2015) South Downs National Park View Characterisation and Analysis (Viewshed Study Report) with promoted views particularly to the north and northwest, as also indicated on OS maps.</p> <p>Edburton Hill and Beeding Hill, also located beyond 5km, are excluded from the viewpoint assessment as the views from these locations towards the onshore cable corridor will be similar to those from Devil’s Dyke. However, they are referred to in the assessment for sequential visibility along the SDW.</p>
Figure 18.59, Volume 3 of the ES (Document Reference: 6.3.18)	O: Cissbury Ring	Specific – walkers and visitors. The viewpoint is located beyond 5km distance from the onshore cable corridor and visibility from the northern side of the hill is limited. This location is also identified as a landmark viewpoint in the Land Use Consultants (2015) South Downs National Park View Characterisation and Analysis (Viewshed Study Report).
Figure 18.60, Volume 3 of the ES	Q: Ferry Road, Sustrans Cycle Route 2	Illustrative – road users and cyclists. Northern prospect from the road is open, viewing across the

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
(Document Reference: 6.3.18)		Arundel Valley (southern views towards the coast are screened by trees).
Figure 18.61, Volume 3 of the ES (Document Reference: 6.3.18)	T: B2116, Partridge Green	Illustrative – road users. Located on the B2116 between Partridge Green and Shermanbury looking east / southeast towards the onshore cable corridor.
Figure 18.62, Volume 3 of the ES (Document Reference: 6.3.18)	T1: PRoW 2373, Partridge Green	Illustrative – footpath users. Located on a PRoW near the sewage works looking southeast towards the onshore cable corridor.
Figure 18.63, Volume 3 of the ES (Document Reference: 6.3.18)	U: Highdown Hill	Specific – walkers and visitors. The viewpoint is located beyond 5km distance from the onshore cable corridor where views are promoted particularly to the south. This location is also identified as a landmark viewpoint in the Land Use Consultants (2015) South Downs National Park View Characterisation and Analysis (Viewshed Study Report).
Figure 18.64, Volume 3 of the ES (Document Reference: 6.3.18)	W: PRoW 1774 north of The Hangers	Illustrative – footpath users. Located on a PRoW off the A281 north of the Hangers viewing south towards the onshore cable corridor.
Figure 18.65, Volume 3 of the ES (Document Reference: 6.3.18)	X: Long Furlong	Illustrative – road users and footpath users. Located on a PRoW slightly elevated ground off the A280 viewing north towards the onshore cable corridor.
Figure 18.66, Volume 3 of the ES (Document Reference: 6.3.18)	LD1; PRoW 2173, south of Chanty Post	Representative view experienced by walkers, to be considered as an alternative to LD2 and/or viewpoint F3 (presented within PEIR (RED, 2021)). (Note: the Open Access Land to the west does not appear to be accessed via a PRoW).

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.67, Volume 3 of the ES (Document Reference: 6.3.18)	LD2; PRoW 2092, east of Chanty Post	Representative view experienced by walkers on the South Downs Way.
Figure 18.68, Volume 3 of the ES (Document Reference: 6.3.18)	LD4; PRoW 2208/2, south east of Harrow Hill	Alternative representative views experienced by walkers on shoulder of Harrow Hill/PRoW 2208-/2.
Figure 18.69, Volume 3 of the ES (Document Reference: 6.3.18)	LD5; PRoW 2209, east of Harrow Hill	Alternative representative views experienced by walkers on PRoW 2209.
Figure 18.70, Volume 3 of the ES (Document Reference: 6.3.18)	NP1; PRoW 2175 Upper Barpham	Representative view experienced by walkers, cyclists and horse riders adjacent bench at opening in vegetation.
Figure 18.71, Volume 3 of the ES (Document Reference: 6.3.18)	NP3; PRoW 2208, Selden Fields	Representative view experienced by walkers, cyclists and horse riders through gap in vegetation.
Figure 18.72, Volume 3 of the ES (Document Reference: 6.3.18)	NP4 PRoW 2091 Monarch's Way	Representative view experienced by walkers, cyclists and horse riders opening in vegetation.
Figure 18.73, Volume 3 of the ES (Document Reference: 6.3.18)	NP5; PRoW 2282, East of Sullington Hill	Representative view experienced by walkers, cyclists and horse riders through gap in vegetation.

Figure number	Viewpoint name and number	GLVIA 3 Viewpoint type/receptor
Figure 18.74, Volume 3 of the ES (Document 6.3.18) (TBC)	WS1; PRoW 2163 east of Lyminster	Illustrative – bridleway users. Located on a PRoW east of Lyminster and west of the Lyminster Bypass with potential views of the onshore cable corridor.
Figure 18.75, Volume 3 of the ES (Document Reference: 6.3.18)	WS3; PRoW 2199 east of The Vinery	Illustrative – footpath users. Located on a PRoW east of The Vinery Industrial estate and residential properties off the Vinery with potential views of the onshore cable corridor.
Figures 18.76 - 88, Volume 3 of the ES (Document Reference: 6.3.18)	Sequential viewpoints: South Downs Way	Illustrative – footpath users. A series of sequential viewpoints have been included along the South Downs Way at Chanctonbury Hill, Barnfarm Hill, Springhead Hill Rackham Hill, and Amberly Mount. In addition, a series of 3D wirelines have been provided from along the South Downs Way.

Potential effects

18.4.45 Potential effects on landscape and visual receptors that have been scoped in for assessment are summarised in **Table 18-14**.

Table 18-14 Potential effects on landscape and visual receptors scoped in for further assessment

Receptor	Activity or impact	Potential effect
Construction phase		
Landscape elements within the LVIA Study Area.	Land preparation (site clearance, earthworks) Advance planting of parts of the landscape design plan as described in Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan within the DAS [REP3-013] and the Outline LEMP [REP4-047] .	Removal of landscape elements present under the baseline conditions – this includes vegetation (trees, woodland, hedges, and scrub) to allow for construction works and access. (Note: the LVIA has included a desk-based assessment of the effects of vegetation management / coppicing at visibility splays at construction accesses).

Receptor	Activity or impact	Potential effect
	Progressive reinstatement planting along the cable corridor, as described in the Outline LEMP [REP4-047] .	Direct and temporary localised effects on landscape elements may be significant.
Host Local LCAs. Local LCAs, and parts of the SDNP and High Weald AONB that are within the LVIA Study Area and that are at least partly within the ZTVs.	Construction activity of the onshore Oakendene substation and existing National Grid Bolney substation extension, landfall and onshore cable corridor including the presence of cranes, other machinery, vehicle movements, associated noise, construction lighting, contractors facilities and site access.	Direct and temporary effects on the host landscape characters including key characteristics and perceptual qualities. Indirect and temporary effects related to the visibility of the construction activities and their effect on landscape character, special landscape qualities and setting of the SDNP and High Weald AONB.
Visual Receptors within the LVIA Study Area: settlements (residents); transport routes (roads and rail); recreational routes (including PRow, National Trails, Sustrans Cycle Routes and other long-distance walking and cycling routes); and recreational and tourist destinations.	Construction activity of the onshore Oakendene substation and existing National Grid Bolney substation extension, landfall and onshore cable corridor including the presence of cranes, other machinery, vehicle movements, associated noise, construction lighting, contractors' facilities and site access.	Temporary effects on views and visual amenity resulting from visibility of the temporary construction activities and the effects of those activities (e.g. loss of vegetation) within the LVIA Study Area.
Operation and maintenance (Year 1 and Year 10)		
Landscape elements within the LVIA Study Area.	Implementation of the landscape design plan, maintenance and management. Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan within the DAS	A new framework of landscape elements such as recontoured land and newly planted hedgerows and trees will be introduced surrounding the onshore substations and along the onshore cable corridor, where applicable.

Receptor	Activity or impact	Potential effect
	<p>[REP3-013] and the Outline LEMP [REP4-047].</p> <p>Completion of reinstatement planting along the cable corridor and maintenance and management, as described in the Outline LEMP [REP4-047].</p>	
<p>Host Local LCAs. Local LCAs, and parts of the SDNP and High Weald AONB that are within the LVIA Study Area and that are at least partly within the ZTVs.</p>	<p>Operation of the onshore Oakendene substation and the existing National Grid Bolney substation extension and reinstatement of the onshore cable corridor</p>	<p>Direct effects on the host landscape character. Indirect effects related to the visibility of the onshore substations and reinstatement of the onshore cable corridor, and its effect on landscape character, the special qualities and setting of the SDNP and High Weald AONB.</p>
<p>Visual Receptors within the LVIA Study Area: settlements (residents); transport routes (roads and rail); recreational routes (including PRow, National Trails, Sustrans Cycle Routes and other long-distance walking and cycling routes); and recreational and tourist destinations.</p>	<p>Operation of the onshore Oakendene substation and the existing National Grid Bolney substation extension and reinstatement of the onshore cable corridor</p>	<p>Effects on views and visual amenity resulting from visibility of the onshore substation and reinstatement of the onshore cable corridor within the LVIA Study Area.</p>
<p>Decommissioning phase</p>		
<p>Host Local LCAs. Local LCAs, and parts of the SDNP and High Weald AONB that are within the LVIA Study Area and that are at least partly within the ZTVs.</p>	<p>Decommissioning activity of the onshore substations including the presence of cranes, other machinery, vehicle movements, associated noise, construction lighting,</p>	<p>Direct and temporary effects on the host landscape character. Indirect and temporary effects related to the visibility of the decommissioning activities and their effect on</p>

Receptor	Activity or impact	Potential effect
	contractors facilities and site access.	landscape character, the special qualities and setting of the SDNP and High Weald AONB.
Visual Receptors within the LVIA Study Area: settlements (residents); transport routes (roads and rail); recreational routes (including PRow, National Trails, Sustrans Cycle Routes and other long-distance walking and cycling routes); and recreational and tourist destinations.	Decommissioning activity of the onshore substation including the presence of cranes, other machinery, vehicle movements, associated noise, construction lighting, contractors' facilities and site access.	Temporary effects on views and visual amenity resulting from visibility of the decommissioning activities within the LVIA Study Area.

Construction accesses and visibility splays

- 18.4.46 A number of construction accesses are required during the construction period and vegetation within the visibility splays will be managed to ensure safety. Commitment C-224 states '*where vegetation clearance is required to provide visibility splays at access points for the purposes of safe access and egress any hedgerows that require cutting will be retained, by cutting to a height of 90cm where safe to do so (any hedgerow trees will be considered on an individual basis). These "coppiced" hedgerows will be agreed with the relevant highways authority and displayed on the stage specific Vegetation Retention and Removal Plan secured by DCO Requirement 40*'. Less impactful, options such as hedge trimming, pruning, crown lifting or similar will be undertaken in accordance with the mitigation hierarchy and pursued as a preference.
- 18.4.47 The LVIA has included a desk-based assessment of the visibility splays at construction accesses, to determine the likelihood of the intrusive vegetation management such as coppicing of visibility splays that could lead to significant landscape and visual effects. The LVIA is supported by visibility splays and speed limits set out for construction accesses listed in **Table 4-3 Access Visibility Splays** in the **Outline Construction Traffic Management Plan [REP4-045]**, in addition visibility splay diagrams and aerial photos have also be used. The LVIA has considered two categories of landscape and visual effect as follows:
- Category 1: Coppicing of existing vegetation down to 90cm above ground. The severity of this will depend on the scale of the existing vegetation which may include mature trees / treelines and is likely to be significant or smaller hedges / scrub which would have a lesser effect.
 - Category 2: Resulting from options such as hedge trimming, pruning, crown lifting which are similar to the current baseline levels of vegetation

management normally undertaken by highway authorities and landowners to maintain visibility along roads. This level of vegetation management is part of the landscape baseline in the same way as changing seasons or crop rotation.

- 18.4.48 Mitigation measures taken to avoid significant landscape and visual effects include traffic management measures to reduce traffic speed (temporary traffic speed limit) which in turn allows for a reduced visibility splay, limiting or avoiding the need for more extensive management. The duration of these effects would be limited to the construction period, with vegetation re-growing during the operation and maintenance phase.

Activities or impacts scoped out of assessment

- 18.4.49 A number of potential effects have been scoped out from further assessment, resulting from a conclusion of no likely significant effect. These conclusions have been made based on the knowledge of the baseline environment, the nature of planned works and the wealth of evidence on the potential for impact from such projects more widely. The conclusions follow (in a site-based context) existing best practice. Each scoped out activity or impact is considered in turn in **Table 18-15**.
- 18.4.50 In addition, a high-level assessment approach (**Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1) has been adopted for those receptors identified at PEIR (RED, 2021) with negligible to zero magnitude of change. In doing so, the high-level assessment approach has reviewed those assessments against the Proposed Development to either confirm or revise that assessment. Where an increase in the magnitude of change is identified a detailed assessment approach has been reported in the ES for the affected receptor.

Table 18-15 Activities or impacts scoped out of assessment

Activity or impact	Rationale for scoping out
Receptors outwith the ZTV	All receptors within the LVIA Study Area that are outwith the ZTV will have <i>no view</i> of the onshore elements of the Proposed Development and are scoped out.
Indirect effects upon National Landscape Character Areas (NCAs) and Seascape Character Areas (MCAs) and County Landscape Character Areas (CCAs) within the LVIA study area	NCAs, MCAs and CCAs within the LVIA Study Area cover extensive areas and consequently it is considered unlikely that the construction, and operation and maintenance of the onshore elements of the Proposed Development will have the potential to result in significant indirect landscape or seascape effects on these receptors. This conclusion is supported by GLVIA3 (Paragraph 5.14) (Landscape Institute and IEMA, 2013), which advises that “ <i>Broad scale assessments at national and regional level can be helpful in setting the landscape context but are unlikely to be helpful on their own as the basis for</i>

Activity or impact	Rationale for scoping out
	<i>LVIA – they may be too generalised to be appropriate for the particular purpose”.</i>

18.5 Methodology for baseline data-gathering

Overview

- 18.5.1 Baseline data collection has been undertaken to obtain information over the LVIA study areas described in **Section 18.4: Scope of the assessment**. The current baseline conditions presented in **Section 18.6: Baseline conditions** sets out currently available data / information from and related to the LVIA Study Area.

Desk study

- 18.5.2 A range of desk-based and site-based data have been sourced to undertake the LVIA, covering landscape and visual receptors and other relevant cumulative development. The desk-based data has been drawn from Ordnance Survey, aerial photography, 3D computer models of the terrain within the study area and a range of document sources in addition to the relevant planning policy documents outlined in **Chapter 2: Policy and legislative context, Volume 2** of the ES (Document Reference: 6.2.2). The data sources that have been collected and used to inform this chapter are summarised in **Table 18-16**.

Table 18-16 Data sources used to inform the ES assessment

Source	Date	Summary	Coverage of LVIA Study Area
Arun District Council	2006	Arun Landscape Study - Landscape and Visual Amenity Aspects of Development Choices in Arun District 2006-2026 (available online: https://www.arun.gov.uk/download.cfm?doc=docm93jijm4n6851.pdf&ver=6564 [Accessed 30 June 2021])	Arun District
Campaign to Protect Rural England (CPRE)	2016	Interactive maps of the UK’s light pollution and dark skies as part of a national mapping project (LUC/CPRE, 2016). Open Source data, used to understand and illustrate baseline lighting levels (available online: https://www.nightblight.cpre.org.uk/maps/ [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
English Heritage	2021	Any specific visitor attractions / tourist destinations (available online: https://www.english-	Full coverage of the LVIA Study Area.

Source	Date	Summary	Coverage of LVIA Study Area
		heritage.org.uk/visit/places/#?page=1&place=&mp=false&fe=false [Accessed 30 June 2021])	
Google Earth Pro and Street View	2021	Aerial Photography and street view photography	Full coverage of the LVIA Study Area.
High Weald AONB	2019	High Weald AONB Boundary (included within the AONB Management Plan 2019 – 2024) (available online: http://www.highweald.org/high-weald-aonb-management-plan.html [Accessed 12 July 2023])	High Weald AONB
Historic England	2021	Registered Parks and Gardens and UNESCO World Heritage Sites (available online: https://historicengland.org.uk/listing/what-is-designation/registered-parks-and-gardens/ [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
Horsham District Council	2003	Horsham District Landscape Character Assessment (available online: https://www.horsham.gov.uk/planning/planning-policy/evidence-base/landscape-character-assessment [Accessed 12 July 2023])	Horsham District
Long Distance Walkers Association	2021	Overview map for Long Distance Paths and Walks (available online: https://www.ldwa.org.uk/ldp/public/ldp_overview_map.php [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
Marine Management Organisation	2016	Marine Character Areas – South Inshore and Offshore Marine Plan Areas (available online: https://www.gov.uk/government/publications/the-south-marine-plans-documents [Accessed 30 June 2021])	Coastal section of LVIA Study Area.
Mid-Sussex District Council	2005	Mid Sussex Landscape Character Assessment (available online: https://www.midsussex.gov.uk/media/1756/lca-part-one-intro-and-background.pdf [Accessed 12 July 2023])	Mid-Sussex District
National Trust	2021	Any specific visitor attractions / tourist destinations (available online: https://www.nationaltrust.org.uk/days-out [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.

Source	Date	Summary	Coverage of LVIA Study Area
Natural England	2013	<p>National Character Area Profiles (NCAP), for information on National Landscape Character Areas:</p> <ul style="list-style-type: none"> • NCAP 120: Wealden Greensand; • NCAP 121: Low Weald; • NCAP 122: High Weald; • NCAP 125: South Downs; and • NCAP 126: South Coast Plain. <p>(available online: https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles#ncas-in-south-east-england-and-london [Accessed 30 June 2021])</p> <p>Landscape Character Types and Landscape Description Units</p>	Full coverage of the LVIA Study Area.
Natural England	2021	<p>Multi-Agency Geographic Information for the Countryside (MAGIC). (available online: https://magic.defra.gov.uk/ [Accessed 30 June 2021]).</p>	Full coverage of the LVIA Study Area.
Natural England	2020	<p>GIS datasets for:</p> <ul style="list-style-type: none"> • National Parks (https://data.gov.uk/dataset/334e1b27-e193-4ef5-b14e-696b58bb7e95/national-parks-england [Accessed 30 June 2021]) • Areas of Outstanding Natural Beauty (AONB) (https://data.gov.uk/dataset/8e3ae3b9-a827-47f1-b025-f08527a4e84e/areas-of-outstanding-natural-beauty-england [Accessed 30 June 2021]) • County Parks (https://data.gov.uk/dataset/e729abb9-aa6c-42c5-baec-b6673e2b3a62/country-parks-england [Accessed 30 June 2021]) • Open Access Land (https://data.gov.uk/dataset/05fa192a-06ba- 	Full coverage of the LVIA Study Area.

Source	Date	Summary	Coverage of LVIA Study Area
		4b2b-b98c-5b6bec5ff638/crow-act-2000-access-layer [Accessed 30 June 2021])	
Ordnance Survey	2019	1:25,000 scale mapping: <ul style="list-style-type: none"> • Explorer OL10 – Arundel & Pulborough • Explorer OL11 – Brighton and Hove • Explorer OL34 - Crawley & Horsham Topo 50 and 5 Digital Terrain Model (DTM) and Digital Surface Model (DSM) data.	Full coverage of the LVIA Study Area.
Ordnance Survey Open Data	2019	Ordnance Survey County Region, Local Unitary Authority, Railways, Roads and Settlements (available online: https://www.ordnancesurvey.co.uk/business-government/products [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
SDNP	2020	South Downs Landscape Character Assessment 2020 (available online: https://www.southdowns.gov.uk/landscape-design-conservation/south-downs-landscape-character-assessment/south-downs-landscape-character-assessment-2020/ [Accessed 30 June 2021])	SDNP
Sustrans	2021	National Cycle Network (GIS dataset) (available online: https://www.sustrans.org.uk/national-cycle-network/ [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
Visit England	2021	Any specific visitor attractions / tourist destinations (available online: https://www.visitengland.com/destinations/south-east-england [Accessed 30 June 2021])	Full coverage of the LVIA Study Area.
WSCC	2003	Landscape character assessment of West Sussex (available online: https://www.westsussex.gov.uk/land-waste-and-housing/landscape-and-environment/landscape-character-assessment-of-west-sussex/ [Accessed 30 June 2021]).	West Sussex
WSCC, East Sussex County	2010	Sussex Historic Landscape Classification (available online: https://www.westsussex.gov.uk/media/1773/sus	West Sussex

Source	Date	Summary	Coverage of LVIA Study Area
Council, Brighton & Hove Unitary Authority and English Heritage		sex_hlc_volume_1.pdf [Accessed 30 June 2021])	
WSCC	2021	Public Rights of Way iMap (available online: https://www.westsussex.gov.uk/land-waste-and-housing/public-paths-and-the-countryside/public-rights-of-way/public-rights-of-way-imap/ [Accessed 30 June 2021]).	West Sussex
WSCC	2020	Local distinctiveness study of West Sussex (available online: https://www.westsussex.gov.uk/land-waste-and-housing/landscape-and-environment/local-distinctiveness-study-of-west-sussex/ [Accessed 30 June 2021])	West Sussex
Wood – Internal dataset	2021	Public Rights of Way	Full coverage of the LVIA Study Area
Woodland Trust	2021	Identified / Ancient Woodlands (available online: https://www.woodlandtrust.org.uk/visiting-woods/find-woods/ [Accessed 30 June 2021])	Full coverage of the LVIA Study Area

Site surveys

18.5.3 Site and field survey activities have included the following:

- field survey verification of landscape elements within the onshore Oakendene substation sites and onshore cable corridor and recommendations for embedded environmental measures where potentially significant effects are identified;
- field survey verification of the ZTV from landscape and visual receptor locations and transport and recreational routes through the LVIA Study Area;
- micro-siting of viewpoint locations and recording of panoramic baseline photography and subsequent visual assessment from the assessment viewpoints; and
- identification of interactions between onshore and offshore elements of the Proposed Development such as whole Proposed Development visibility or landscape and seascape effects.

- 18.5.4 All site survey work has been undertaken in fair weather conditions with good to excellent visibility. **Table 18-17** shows the dates of survey work undertaken to date.

Table 18-17 Site surveys undertaken

Survey type	Coverage of Study Area	Survey Status
Familiarisation of LVIA study area, verification of ZTV from landscape and visual receptor locations, viewpoint photography and verification of landscape elements.	Full coverage of LVIA Study Area, including areas of potential visibility beyond the LVIA Study Area from specific elevated locations.	Surveys completed during October to December 2020, and January 2021.
Viewpoint photography from a number of PEIR and ES viewpoint locations, and new locations as agreed with stakeholders. Walk over surveys accessing specific landscape and visual receptors at the onshore Oakendene substation and existing National Grid Bolney substation and along onshore cable corridor route options.	Full coverage of LVIA Study Area and ZTV, including areas of potential visibility beyond the LVIA Study Area from specific elevated locations.	Surveys completed during July 2022.
Viewpoint photography from a number of ES viewpoint locations, and new locations as agreed with stakeholders. Walk over surveys accessing specific landscape and visual receptors at the onshore Oakendene substation and existing National Grid Bolney substation and along route onshore cable corridor route options.	Full coverage of LVIA Study Area and ZTV.	Surveys completed during November 2022 and April and May 2023.
Additional viewpoint photography in the Oakendene area with walk over surveys accessing specific landscape and visual receptors at the onshore Oakendene substation.	Full coverage of LVIA Study Area and ZTV.	Surveys completed during April 2024.

Data limitations

- 18.5.5 There are no known data limitations relating to the LVIA that affect the robustness of the assessment of this ES.

18.6 Baseline conditions

Current baseline

- 18.6.1 Information on the existing landscape resource or baseline conditions included in the LVIA has been collected from local plans, Ordnance Survey maps, and relevant literature, as well as information gathered from site and LVIA Study Area surveys. This baseline information is set out as an inventory of the existing landscape resource and focuses on those landscape and visual receptors with most potential to be significantly affected.

Baseline of landscape receptors

- 18.6.2 The LVIA Study Area covers a large, linear area from the West Sussex coast, through West Sussex and the SDNP and crosses the districts of Arun, Horsham and Mid Sussex. For ease of reference the onshore cable corridor has been divided into three sections and each of the onshore elements including in the assessment are listed as follows:
- Oakendene substation;
 - Existing National Grid Bolney substation extension (GIS and AIS options); and
 - the onshore cable corridor, which is subdivided into three sections:
 - ▶ Part 1: Climping to SDNP;
 - ▶ Part 2: SDNP; and
 - ▶ Part 3: SDNP to Oakendene / Bolney.

Landscape context

- 18.6.3 The topography of the landscape within the LVIA Study Area varies from being relatively flat in the south towards the coast at 3m Above Ordnance Datum (AOD) rising to 238m AOD at Chanctonbury Hill within the central part of the SDNP before dropping down into the low-lying vales of the Low Weald at around 10m AOD in the northeast near Bolney. The landform rises again towards the High Weald AONB beyond Bolney.
- 18.6.4 The landscape between the landfall at Climping near Atherington and the edge of the SDNP is a coastal plain, very gently rising north/northeast towards the National Park. The relatively flat, lower coastal plain is heavily urbanised and includes parts of the settlements of Littlehampton, Middleton-On-Sea and Arundel linked by road (A27, A259 and A284) and regional rail corridors. In between development and transport links is a farmed landscape of large open fields with few trees and hedgerows. Drainage ditches, wire fences or low banks are more usual as field boundaries. Further north, the upper coastal plain comprises flat, regular patterns of large fields with gentler forms and patterns, blending into the openness of the lower dip slope of the SDNP. Here the landscape is varied, incorporating both open arable farmland and low-density settlements, with a more wooded and semi-enclosed (somewhat suburban) character locally at the settlements of Arundel and Crossbush near the A27.

- 18.6.5 The part of the SDNP within the LVIA Study Area comprises a broad elevated east–west ridge with a predominantly steep, north facing scarp slope and a gentle southerly dip slope, breaking into a series of hills east and west beyond the LVIA Study Area. The area to the east of the River Arun is characterised by larger open arable and grassland fields, with a general absence of woodland and fewer hedgerow boundaries, creating an open, ‘South Downs’ landscape, however, the area to the south, and west of the River Arun features large woodlands. Roads and villages are mainly concentrated in the river valleys (River Arun) with the more elevated areas sparsely settled with scattered farmsteads. PRow including the South Downs Way National Trail traverse this landscape with some routes benefiting from panoramic views across the downs and beyond.
- 18.6.6 Between the SDNP and the northeast of the LVIA Study Area, the topography of the landscape drops sharply into the broad, low-lying vales of the Low Weald, before rising again towards the High Weald AONB beyond. This landscape is predominantly agricultural and largely pastoral with either grassland or meadows. Field boundaries of hedgerows enclose small, irregular fields linking small and scattered linear settlements. A number of smaller towns and villages including Henfield, Ashington, Cowfold, Partridge Green and Bolney are scattered among areas of woodland, where larger villages have grown around major transport routes including the A23, A272 and A281. Numerous woodland blocks are scattered throughout this landscape along with many small rivers, streams and water features such as ponds and brooks.
- 18.6.7 The baseline inventory in **Table 18-18** to **Table 18-20** includes the following landscape receptors overlapped by the ZTV within the 2km LVIA Study Area:
- Landscape Character Units; and
 - Landscape Planning Designations.
- 18.6.8 Further, more detailed description of the landscape and the various landscape receptors within the study area and along the onshore cable corridor is provided in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3).

Onshore substation at Oakendene – landscape receptors

- 18.6.9 The baseline landscape receptors for the onshore substation at Oakendene include landscape character areas as defined in the landscape character assessments for Horsham District (Horsham Landscape Character Areas (2003)) and the Mid Sussex Landscape Character Areas (2006) and the High Weald AONB. The county-based Landscape Character assessment of West Sussex (2003) and the Historic Landscape Character for these areas are also referred to for reference.
- 18.6.10 The LCAs and the AONB are illustrated in **Figure 18.5a, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.11 The ZTV are illustrated in **Figures 18.2a-c, Volume 3** of the ES (Document Reference: 6.3.18) (including construction compounds). Those receptors underlined in **Table 18-18**, have been included in the assessment because the ZTV (**Figure 18.2a-b, Volume 3** of the ES (Document Reference: 6.3.18)), site

visits and viewpoint analysis indicate that the onshore substation at Oakendene will be theoretically visible from these receptors.

- 18.6.12 Conversely, ZTV, site visits and viewpoint analysis indicate that there will be no visibility of the onshore substation at Oakendene from the HW10 High Weald Fringes LCA and this has been excluded from the assessment. The LW9 Upper Adur Valley LCA and the P2 Upper Adur Valley LCA are outwith the ZTV and consequently they are also excluded from the assessment.
- 18.6.13 The High Weald AONB is the only landscape designation within the LVIA Study Area for the onshore substation. Although site visits and viewpoint analysis indicate that there would be limited visibility the AONB has been included in the assessment considering its national importance.
- 18.6.14 Effects on the landscape receptors underlined in **Table 18-18** and on the High Weald AONB are assessed in **Section 18.9**.

Table 18-18 Onshore substation at Oakendene – landscape receptors overlapped by ZTV within 2km (Figures 18.2 and 18.5a, Volume 3 of the ES (Document Reference: 6.3.18))

National Character Area (NCA)	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)
‘Host’ Landscape Character Units			
<u>NCA 121: Low Weald</u> <u>NCA 122: High Weald</u>	<u>LW10: Eastern Low Weald</u>	<u>J3 Cowfold & Shermanbury Farmlands</u>	<u>Area 36: Adur Valley and Catchment</u>
Other Landscape Character Units			
<u>NCA 122: High Weald</u>	<u>HW4: High Weald Fringes</u>	<u>M1 Crabtree & Nuthurst Ridges & Ghylls</u>	<u>Area 36: Adur Valley and Catchment</u>
<u>NCA 121: Low Weald</u> <u>NCA 122: High Weald</u>	<u>LW10: Eastern Low Weald</u>	<u>LW1 Hickstead Low Weald</u>	<u>Area 36: Adur Valley and Catchment</u>
NCA 122: High Weald	HW4: High Weald Fringes (excluded from the LVIA)	HW10 High Weald Fringes (excluded from the LVIA)	Area 36: Adur Valley and Catchment
Landscape Designations	<u>High Weald AONB</u> Effects on other designations such as Registered Parks and Gardens, Conservation Areas and Nature Reserves are covered in Chapter 25: Historic environment, Volume 2 of the ES (Document Reference: 6.25.2) and Chapter 22: Terrestrial		

National Character Area (NCA)	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)
ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) respectively.			

Existing National Grid Bolney substation extension – landscape receptors

- 18.6.15 The baseline landscape receptors for the existing National Grid Bolney substation extension include landscape character areas as defined in the landscape character assessments for Horsham District (Horsham Landscape Character Areas (2003)) and the Mid Sussex Landscape Character Areas (2006) and the High Weald AONB. The county-based Landscape Character assessment of West Sussex (2003) and the Historic Landscape Character for these areas are also referred to for reference.
- 18.6.16 The LCAs and the AONB are illustrated in **Figure 18.5a, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.17 The ZTVs are illustrated in **Figures 18.3a-c, Volume 3** of the ES (Document Reference: 6.3.18) and include the construction compound and the AIS and GIS substation options. Those receptors underlined in **Table 18-18**, have been included in the assessment because the ZTV (**Figure 18.3a-c, Volume 3** of the ES (Document Reference: 6.3.18)), site visits and viewpoint analysis indicate that the existing National Grid Bolney substation extension will be theoretically visible from these receptors.
- 18.6.18 Conversely, ZTV, site visits and viewpoint analysis indicate that there will be no visibility of the existing National Grid Bolney Substation extension (GIS and AIS options) from any of the other surrounding landscape character units listed in **Table 18-19**. These include the LCAs of LW2 Upper Adur Valley, P2 Upper Adur Valleys, and HW10 High Weald Fringes. They are all therefore excluded from the assessment.
- 18.6.19 The J3 Cowfold and Shermanbury Farmlands LCA and the M1 Crabtree & Nuthurst Ridges & Ghylls LCA are outwith the ZTV and consequently they are also excluded from the assessment.
- 18.6.20 The High Weald AONB is the only landscape designation within the LVIA Study Area. ZTV, site visits and viewpoint analysis indicate that there will be no visibility of the existing National Grid Bolney Substation extension (GIS and AIS options) and it has therefore been excluded from further assessment.
- 18.6.21 Effects on the host landscape character and on the High Weald AONB are assessed in **Section 18.10**.

Table 18-19 Existing National Grid Bolney Substation extension (GIS and AIS options) – landscape receptors overlapped by ZTVs within 2km (Figures 18.3 and 18.5a-b, Volume 3 of the ES (Document Reference: 6.3.18))

National Character Area (NCA)	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)
'Host' Landscape Character Unit			
<u>NCA 121: Low Weald</u>	<u>LW10: Eastern Low Weald</u>	<u>LW1 Hickstead Low Weald</u>	<u>Area 36: Adur Valley and Catchment</u>
Other Landscape Character Units			
NCA 121: Low Weald	LW10: Eastern Low Weald	LW2 Upper Adur Valley (excluded from the LVIA)	Area 36: Adur Valley and Catchment
NCA 121: Low Weald	LW9: Upper Adur Valley	P2 Upper Adur Valleys (excluded from the LVIA)	Area 36: Adur Valley and Catchment
NCA 122: High Weald	HW4: High Weald Fringes	HW10 High Weald Fringes (excluded from the LVIA)	Area 36: Adur Valley and Catchment
Landscape Designations	High Weald AONB (excluded from the LVIA) Effects on other designations such as Registered Parks and Gardens, Conservation Areas and Nature Reserves are covered in Chapter 25: Historic environment, Volume 2 of the ES (Document Reference: 6.2.25) and Chapter 22: Terrestrial ecology and nature conservation, Volume 2 of the ES (Document Reference: 6.2.22) respectively.		

Onshore cable corridor – landscape receptors

- 18.6.22 The baseline landscape receptors for the onshore cable corridor include landscape character areas (LCAs) as defined in the landscape character assessments for Arun District, Horsham District, Mid Sussex District and the SDNP. These are set out in **Table 18-16** and reference is also made to Natural England's National Landscape Character Areas and at a county level the West Sussex Landscape character assessment. The landscape assessment has also had regard to the Sussex Historic Landscape Classification, and the Local distinctiveness study of West Sussex. Within the SDNP the assessment has had regard to the park authorities landscape character assessment (SDNPA, 2020) and key documents including South Downs Viewshed Study Report (SDNPA, 2015b) and the South Downs National Park Special Qualities report (2011).

- 18.6.23 The LCAs along the onshore cable corridor are illustrated in **Figures 18.5bi-iii, Volume 3** of the ES (Document Reference: 6.3.18) and the landscape designations for the SDNP and the High Weald AONB are illustrated in **Figures 18.6a-e, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.24 The ZTV are illustrated in **Figures 18.4a-e, Volume 3** of the ES (Document Reference: 6.3.18) (including construction compounds – recheck with final ZTV). **Table 18-20** sets out an inventory of the LCAs and landscape designations that fall within the 2km LVIA Study Area for the onshore cable corridor. Those receptors which are underlined have been included in the assessment because the ZTV, site visits and viewpoint analysis indicate that the onshore cable corridor and associated temporary construction compounds will be theoretically visible from these receptors. This includes six LCAs within Arun District, five LCAs within Horsham District, one LCA within Mid Sussex District and the six LCAs within the SDNP.
- 18.6.25 Two national level landscape designations (the SDNP and the High Weald AONB) are overlapped by the 2km LVIA Study Area for the onshore cable corridor. Both of these are included in the assessment, although the PEIR (RED, 2021) and subsequent consultation with Natural England and the High Weald AONB Partnership, and further design and assessment indicate that the effects on the High Weald AONB are unlikely to be significant.
- 18.6.26 The viewpoint analysis (**Appendix 18.2: Visual analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) indicates that significant visual effects (during the construction phase only) will extend up to 650m distance from the onshore cable corridor (including temporary construction compounds) although the majority of the effects will be within one or two field boundaries or 300m. For this reason, the landscape assessment has been limited to those LCA's within the 1km buffer from the onshore cable corridor, with limited ZTV coverage and / or where site visits and viewpoint analysis indicates non-significant visual effects.
- 18.6.27 Effects of the onshore cable corridor on landscape receptors listed and underlined in **Table 18-20** (landscape character and landscape designations) are assessed in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3) and summarised in **Section 18.11** and **Section 18.12**.
- 18.6.28 Effects on other designations such as Registered Parks and Gardens, Conservation Areas, and Nature Reserves are covered in **Chapter 25: Historic environment, Volume 2** of the ES (Document Reference: 6.2.25) and **Chapter 22: Terrestrial ecology and nature conservation, Volume 2** of the ES (Document Reference: 6.2.22) respectively.

Table 18-20 Onshore cable corridor – landscape receptors overlapped by ZTVs within 2km (south to north)

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
Part 1: Climping to SDNP (Figure 18.5bi, Volume 3 of the ES (Document Reference: 6.3.18)) <i>The assessment of landscape character areas has focused on the more recent and detailed Arun Landscape Character Assessment (2006) rather than the county-based Landscape Character assessment of West Sussex (2003).</i>				
NCA 126: South Coast Plain	<u>SC1: South Coast Shoreline</u>	None	Area 21: Worthing Coastal Plain	Included
	SC9: Chichester to Yapton Coastal Plain	28 Withy Rife (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor located beyond the 1km buffer with site visits and Viewpoint D (Figure 18.24, Volume 3 of the ES (Document Reference: 6.3.18)) indicating non-significant visual effects.
	SC9: Chichester to Yapton Coastal Plain	29 North of Yapton Coastal Plain (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor located beyond the 1km buffer and built-up area of Ford with site visits indicating non-significant visual effects.
	SC9: Chichester to Yapton Coastal Plain	<u>31 Climping Lower Coastal Plain</u>	Area 21: Worthing Coastal Plain / Area 23: Coastal hinterland of Bognor	Included

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
	SC8: Fontwell Upper Coastal Plain / SC9: Chichester to Yapton Coastal Plain	32 Tortington Arun Valley Sides (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor located beyond the 1km buffer with site visits and Viewpoint D (Figure 18.24, Volume 3 of the ES (Document Reference: 6.3.18)) indicating non-significant visual effects.
	SC10: Lower Arun Valley	33 Upper Arun Valley Floor (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor outwith ZTV.
	SC10: Lower Arun Valley	<u>34 Middle Arun Valley Floor</u>	Area 23: Coastal hinterland of Bognor	Included
	SC10: Lower Arun Valley	<u>35 Lower Arun Valley Floor</u>	Area 21: Worthing Coastal Plain / Area 23: Coastal hinterland of Bognor	Included
	SC10: Lower Arun Valley / SC12: Angmering Upper Coastal Plain	36 Crossbush Arun Valley Sides (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor located beyond the 1km buffer due to route change, with site visits and Viewpoint H1e (Figure 18.35, Volume 3 of the ES (Document Reference: 6.3.18)) indicating non-significant visual effects.

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
	SC10: Lower Arun Valley / SC12: Angmering Upper Coastal Plain	37 Lyminster Arun Valley Sides (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Site visits and Viewpoint H1e (Figure 18.35, Volume 3 of the ES (Document Reference: 6.3.18)) and omitted Viewpoint R indicating non-significant visual effects, due to route change.
	SC10: Lower Arun Valley	<u>38 Littlehampton Arun Valley Sides</u>	Area 23: Coastal hinterland of Bognor	Included
	SC10: Lower Arun Valley	39 Littlehampton Northern Fringe (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor is peri-urban and site visits indicate non-significant visual effects.
	SC11: Littlehampton and Worthing Fringes / SC12: Angmering Upper Coastal Plain	40 Lyminster-Angmering Coastal Plain (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Included
	SC11: Littlehampton and Worthing Fringes	<u>41 Black Ditch Rife</u>	Area 23: Coastal hinterland of Bognor	Included
	SC11: Littlehampton and Worthing Fringes	42 Angmering Coastal Plain (excluded from the LVIA)	Area 21: Worthing Coastal Plain / Area 23: Coastal	Scoped out. Receptor located beyond the 1km buffer with limited ZTV coverage indicating non-significant visual effects.

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
			hinterland of Bognor	
	SC12: Angmering Upper Coastal Plain	43 Ecclesden hills (excluded from the LVIA)	Area 23: Coastal hinterland of Bognor	Scoped out. Receptor outwith ZTV.

Part 2: SDNP (Figure 18.5bii, Volume 3 of the ES (Document Reference: 6.3.18))

All Landscape Character Areas in this section are within the SDNP with the South Downs Landscape Character Assessment, 2020 taking precedent over other character assessments.

Landscape Character Areas	G4: Arun Valley Sides (excluded from the LVIA)		Area 23: Coastal hinterland of Bognor	Scoped out. Receptor located beyond the 1km buffer and / or outwith the ZTV. Site visits and omitted Viewpoint WS2 indicate no significant effects.
	<u>R1: South Downs Upper Coastal Plain</u>		Area 23: Coastal hinterland of Bognor	Included
	<u>B4: Angmering and Clapham Wooded Estate Downland</u>		Area 23: Coastal hinterland of Bognor	Included
	<u>A3: Arun to Adur Open Downs</u>		Area 23: Coastal hinterland of Bognor / Area 27: Downs scarp at Storrington	Included

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
		<u>I3: Arun to Adur Down Scarp</u>	Area 27: Downs scarp at Storrington	Included
		<u>J3: Arun to Adur Scarp Footslopes</u>	Area 27: Downs scarp at Storrington	Included
<p>Part 3: SDNP to Oakendene / Bolney (Figure 18.5biii, Volume 3 of the ES (Document Reference: 6.3.18)) <i>The assessment of landscape character areas has focused on the more recent and/or detailed Horsham Landscape Character Areas (2003) and Mid Sussex Landscape Character Areas (2006) rather than the county-based Landscape Character assessment of West Sussex (2003).</i></p>				
NCA 120: Wealden Greensand NCA121: Low Weald	WG8: Central Scarp Footslopes	<u>D1 Amberley to Steyning Farmlands</u>	Area 27: Downs scarp at Storrington	Included – area north of Washington. (Two small areas to the south of Storrington are beyond the 1km buffer and outwith the ZTV).
	LW11: Eastern Scarp Footslopes	D2 Henfield & Small Dole Farmlands (excluded from the LVIA)	Area 22: Downs to north of Hove	Scoped out. Receptor located beyond the 1km buffer and / or outwith the ZTV with site visits indicating no significant effects).
	WG7: Storrington Woods and Hearths	<u>E1 Parham & Storrington Wooded Farmlands &Heaths</u>	Area 29: Rother Valley & West Chiltington	Included – area north of Washington at Rock Common. (Two areas to the south and east of Storrington related to mineral works and are mostly beyond the 1km buffer and / or outwith the ZTV).

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
NCA121: Low Weald	WG7: Storrington Woods and Hearths	<u>F1 Pulborough, Chiltington & Thakeham Farmlands</u>	Area 29: Rother Valley & West Chiltington	Included
	LW7: Wiston Low Weald	<u>G1 Ashurst & Wiston Wooded Farmlands</u>	Area 29: Rother Valley & West Chiltington	Included
	LW9: Upper Adur Valley	<u>O3 Steyning & Henfield Brooks</u>	Area 29: Rother Valley & West Chiltington / Area 36: Adur Valley & catchment	Included (One area north of 1km buffer with limited ZTV coverage and site visits indicating no significant effects, excluded).
		<u>P2 Upper Adur Valleys</u>	Area 22: Downs to north of Hove / Area 36: Adur Valley & catchment	Scoped out. Small area of LCA with limited visibility due to vegetation screening, confirmed by site visits and omitted Viewpoint V1 .
	LW5: Southern Low Weald	J2 Broadford Bridge to Ashington Farmlands (excluded from the LVIA)	Area 36: Adur Valley & catchment	Scoped out. Receptor located beyond the 1km buffer on edge of 2km LVIA Study Area.
	LW10: Eastern Low Weald	<u>J3 Cowfold & Shermanbury Farmlands</u>	Area 36: Adur Valley & catchment	Included (One area north of Henfield and 1km buffer with limited ZTV coverage excluded).

National Character Area (NCA) / Designation	County Character Area	Local Character Area (LCA)	Historic Landscape Character (HLC)	Scoped into the assessment?
		<u>LW1 Hickstead Low Weald</u>	Area 36: Adur Valley & catchment	Included
		LW2 Upper Adur Valley (excluded from the LVIA)	Area 36: Adur Valley & catchment	Scoped out. Receptor located beyond the 1km buffer and / or outwith the ZTV. Site visits and omitted Viewpoint VSC4 indicate no significant effects.
NCA 122: High Weald	HW4: High Weald Fringes	HW10 High Weald Fringes (excluded from the LVIA)	Area 36: Adur Valley & catchment	Scoped out. Receptor located mostly beyond the 1km buffer and / or outwith the ZTV. Site visits and omitted Viewpoint M indicate no significant effects.
		M1 Crabtree & Nuthurst Ridges & Ghylls (excluded from the LVIA)	Area 36: Adur Valley & catchment	Scoped out. Receptor located mostly beyond the 1km buffer and / or outwith the ZTV. Site visits and omitted Viewpoint VSA6 indicate no significant effects.
Landscape designations (Figure 18.5biii, Volume 3 of the ES (Document Reference: 6.18.3))				
SDNP and South Downs International Dark Sky Reserve	Multiple	Multiple	Multiple	Included
High Weald AONB	Multiple	Multiple	Multiple	Included

Baseline of visual receptors

- 18.6.29 The visual assessment draws upon the ZTV, site visits and viewpoint analysis and assesses the potential visual effects on views and visual amenity likely to be experienced by receptors (people) within the landscape at the following visual receptor locations:
- settlements and individual residential properties (the latter are the subject of residential visual amenity assessment (RVAA) **Appendix 18.5: Residential Visual Amenity Assessment, Volume 4** of the ES [APP-171];
 - transport routes (roads and rail);
 - recreational routes (PRoW including National Trails, Sustrans Cycle Routes and other long-distance walking and cycling routes); and
 - recreational and tourist destinations.
- 18.6.30 Views experienced within the 2km LVIA Study Area are influenced by landform and features such as woodlands and built development. Views tend to be open in the south and along the coastline, affording panoramic views out to sea from areas of the coastal plain. Long distance views also occur from within the elevated parts of the SDNP, particular the open downs and from parts of the High Weald AONB where vegetation does not restrict views. Moving further inland, to areas away from the coast, including the lower lying areas of the SDNP and areas to the northeast of the LVIA Study Area, variations in topography and a greater concentration of woodlands and hedgerows combine to frame, filter and foreshorten views. The baseline of visual receptors has had regard to the ZTV, site visits and viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) which indicate the likely visibility of the onshore elements of the Proposed Development from the receptor locations.
- 18.6.31 The existing National Grid Bolney substation and the existing Rampion 1 onshore substation are well screened beyond roadside trees. A row of high voltage electrical pylons (Bolney to Lovedean 400Kv overhead line) are visible in views from limited locations extending to the northwest beyond Cowfold and to the east beyond the A23.
- 18.6.32 The visual receptors for each of the onshore substations at Oakendene and the existing National Grid Bolney substation extension), and the onshore cable corridor (including temporary construction compounds and access routes) are set out individually in **Table 18-21** to **Table 18-23**. A detailed assessment of the visual effects of the onshore substations is provided in **Section 18.9** and **Section 18.10**.
- 18.6.33 An assessment of the visual effects of the onshore cable corridor is provided in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4) and summarised in **Sections 18.11-18.12**.

Onshore substation at Oakendene – visual receptors

- 18.6.34 The baseline visual receptors for the visual assessment of the onshore Oakendene substation include the settlement of Cowfold and individual residential properties, three roads and four PRoW. These receptors have been included in

the assessment because the ZTV, site visits and viewpoint analysis indicate that the onshore substation at Oakendene will be theoretically visible from these receptors.

- 18.6.35 Residential properties including Coopers Cottage and Oakendene Manor are included in the Residential Visual Amenity Assessment (RVAA) (see **Appendix 18.5: Residential Visual Amenity Assessment, Volume 4** of the ES (Document Reference: 6.4.18.5)).
- 18.6.36 The principal visual receptors and ZTV are illustrated in **Figures 18.2a-c, Volume 3** of the ES (Document Reference: 6.3.18) (including construction compounds) and **Figure 18.7c, Volume 3** of the ES (Document Reference: 6.3.18) whilst the PRoW are illustrated in **Figure 18.9c, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.37 Conversely, ZTV, site visits and viewpoint analysis indicate that there will be no visibility of the onshore substation at Oakendene from other settlements, including Wineham, other transport routes, PRoW and no known recreational and / or tourist destinations, including Wineham Lane Caravan Park.
- 18.6.38 Effects on the visual receptors are assessed in **Section 18.9**.

Table 18-21 Onshore substation at Oakendene – visual receptors within 2km

Visual receptor	
Settlements	<p>- <u>Cowfold and individual residential property Oakendene Manor.</u> Site visits and viewpoint analysis confirm no visibility from other settlements within 2km including Wineham due to screening from intervening landform, built-form and / or vegetation, even in the winter. Site visits and viewpoint analysis also confirms Negligible to Zero visibility from individual properties within 1km, including those at Southlands Farm, Eastland’s Farm, New Barn, Eastfields Farm and Westridge Farm and properties along the A272 at New Barn, due to screening from intervening landform, vegetation and / or built-form. These receptors are therefore excluded from further assessment.</p>
Transport routes	<p>- <u>A272;</u> - <u>A281; and</u> - <u>Kent Street.</u> There will be Negligible to Zero visibility from other transport routes within 2km due to screening from intervening landform, built-form and / or vegetation, even in the winter.</p>
Recreational routes	<p>- <u>PRoW 1786 between east of Taintfield Wood and the A272;</u> - <u>PRoW 1788 between west of Taintfield Wood and Oakendene Industrial Estate; and</u> - <u>PRoW 1775 and 1777 near Eastlands Farm.</u> There will be Negligible to Zero visibility from any other recreational routes within 2km due to screening from intervening landform, built-form and / or vegetation, even in the winter (see Viewpoints SA5 and SA8 (Figure 18.14, Volume 3 of the ES, (Document Reference: 6.3.18)).</p>

Visual receptor

Recreational and tourist destinations	<p>There will be Zero visibility from Wineham Lane Caravan Park due to screening from intervening landform, built-form and/or vegetation, even in the winter.</p> <p>There are no other known recreational and/or tourist destinations within the 2km LVIA Study Area and ZTV.</p>
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Existing National Grid Bolney substation extension – visual receptors

- 18.6.39 The baseline visual receptors for the visual assessment of the existing National Grid Bolney substation extension (including both AIS and GIS substation options) include Bob Lane and two PRow. These receptors have been included in the assessment because the ZTV, site visits and viewpoint analysis indicate that the onshore substation will be theoretically visible from these receptors.
- 18.6.40 The principal visual receptors and ZTV are illustrated in **Figures 18.3a-c, Volume 3** of the ES (Document Reference: 6.3.18) (including temporary construction compounds) and **Figure 18.7c, Volume 3** (Document Reference: 6.3.18) whilst the PRow are illustrated in **Figure 18.9c, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.41 Conversely, ZTV, site visits and viewpoint analysis indicate that there will be no visibility of the existing National Grid Bolney substation extension (including both AIS and GIS substation options) from settlements including Wineham, other transport routes, PRow and no known recreational and/or tourist destinations, including Wineham Lane Caravan Park.
- 18.6.42 Effects on the visual receptors are assessed in **Section 18.11**.

Table 18-22 National Grid Bolney substation extension (GIS and AIS options) – visual receptors within 2km

Visual receptor

Settlements	<p>Site visits and viewpoint analysis confirm Negligible to Zero visibility from any settlements within and just beyond 2km including Wineham, Twineham, Twineham Green, Crosspost, Bolney, Cowfold and Hickstead, due to screening from intervening landform, vegetation and / or built-form.</p> <p>Site visits and viewpoint analysis also confirm Negligible to Zero visibility from individual properties within 1km, including those at Twineham Grange Farm, the Old Doctors and along Bob Lane, due to screening from intervening landform, vegetation and / or built-form.</p> <p>These receptors are therefore excluded from further assessment.</p>
Transport routes	<p>- <u>Bob Lane</u>.</p> <p>There will be Negligible to Zero visibility from other transport routes within 2km including the A272, Wineham Lane, Bolney Chapel Road,</p>

Visual receptor

Kent Street, Fryland Lane and Hickstead Lane due to screening from intervening landform, built-form and/or vegetation, even in the winter.

Recreational routes

- PRoW 1T / 36Bo between Wineham Lane and Coombe House; and
- PRoW 8T / 34Bo between Bob Lane and Coombe House.

Site visits and viewpoint analysis confirm that there will be Negligible to Zero visibility from other recreational routes within 2km including Sustrans Cycle Route 20 and the nearby PRoW 1790,1791 and 3SBo (due to screening from intervening landform, built-form and / or vegetation, even in the winter).

Recreational and tourist destinations

There will be Zero visibility from Wineham Lane Caravan Park due to screening from intervening landform, built-form and / or vegetation, even in the winter. No other recreational and tourist destinations within 2km.

Onshore cable corridor – visual receptors

- 18.6.43 **Table 18-26** sets out an inventory of the visual receptors that fall within the 2km Study Area for the onshore cable corridor.
- 18.6.44 The principal visual receptors and ZTV are illustrated in **Figures 18.3a-e, Volume 3** of the ES (Document Reference:6.3.18) (including temporary construction compounds) and **Figure 18.7a-c, Volume 3** of the ES (Document Reference: 6.3.18) whilst the PRoW are illustrated in **Figure 18.9a-c, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.6.45 The viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) indicates that significant visual effects (during the construction phase only) will extend up to 650m distance from the onshore cable corridor (including temporary construction compounds) although the majority of the effects will be within one or two field boundaries or 300m. For this reason, the landscape assessment has been limited to those receptors within the 1km buffer from the onshore cable corridor, with limited ZTV coverage and / or where site visits and viewpoint analysis indicates non-significant visual effects.
- 18.6.46 Those receptors which are underlined in **Table 18-26** have been included in the assessment because the ZTV, site visits and viewpoint analysis indicate that the onshore cable corridor and associated temporary construction compounds will be visible from these receptors.
- 18.6.47 Effects of the onshore cable corridor on visual receptors listed and underlined in **Table 18-26** are assessed in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4) and summarised in **Section 18.11**.

Table 18-23 Onshore cable corridor – visual receptors within 2km (south to north)
Visual receptors
Part 1: Climping to SDNP

Settlements

- Climping and Atherington;
- Littlehampton;
- Lyminster; and
- Polling.

There will be Negligible to Zero / no visibility of the onshore cable corridor from other settlements (including Arundel) previously assessed at PEIR (RED, 2021), which are now outwith the LVIA Study Area due to onshore cable route changes and the screening effects of intervening vegetation, built-form and / or landform. Other settlements including Middleton on Sea, and Yapton are also beyond the LVIA Study Area and would not be significantly affected due to the screening from intervening vegetation, built-form and / or landform.

Transport routes

- Climping Street;
- A259;
- Ferry Road (see also Sustrans Cycle Route 2);
- Church Lane;
- Ford Road;
- A284 Lyminster Road / Bypass;
- A27; and
- Railway Line from Littlehampton and Ford to Arundel.

There will be Negligible to Zero visibility of the onshore cable corridor from other transport routes within 2km (including the B2233 and roads internal to settlements, such as the B2187 and other roads within Littlehampton) due to screening from intervening landform, built-form and / or vegetation, even in the winter.

Recreational routes

National Routes:

- Sustrans Cycle Routes 2
(see also Ferry Road and South Coast Cycle Route).
- England Coastal Path National Trail
(see also Arun Way and PRoW 829).

Local Routes:

- Arun Way; and
- South Coast Cycle Route.

PRoW within 1km and ZTV:

- PRoW 168, 169, 172, 173, 174, 197, 200/5, 206, 2163, 2163/1, 2165, 2176, 2198, 2199, 2200, 2201, 2202/1, 2207, and 3096.

Visual receptors

There will be Negligible to Zero visibility from other recreational routes beyond 1km including PRow 2155, 2156, 2205 and group of PRowS within Littlehampton and Wick and west of Ford Road due to screening from intervening landform, built-form and / or vegetation, even in the winter.

Although the England Coastal Path National Trail along Climping Beach has been approved by the Secretary of State (SoS) but it is not yet formally open and PRow 829 and has been used as a proxy for the assessment. Effects on walkers at Climping Beach are also included in the assessment.

Recreational and tourist destinations

- Climping Beach;
- Open Access Land in Atherington
- Littlehampton Golf Club;
- Littlehampton West and East Beach;
- Climping Camp Site;
- Climping Caravan Park; and
- Brookside Caravan Park.

There will be Negligible to Zero visibility of the onshore cable corridor from other recreational and tourist destinations within 2km including Elmer Beach, Crossbush Caravan Park, Ship & Anchor Caravan Park and Littlehampton Caravan Park.

Part 2: SDNP

Settlements

- Washington (including Washington recreation Ground, allotments and village green).

There will be Negligible to Zero / no visibility of the onshore cable corridor from other settlements (including Crossbush, Warningcamp, Burpham, and Wepham) previously assessed at PEIR (RED, 2021), which are now outwith the LVIA Study Area due to onshore cable route changes and the screening effects of intervening vegetation, built-form and / or landform.

Transport routes

- A24; and
- A283.

There will be Negligible to Zero / no visibility of the onshore cable corridor from other transport routes (including Crossbush Lane, Clay Lane and Blakehurst Lane near Warningcamp, minor roads at Wepham and Burpham, and the railway line from Arundel to Amberley) which were previously assessed at PEIR (RED, 2021) and are now outwith the LVIA study area due to onshore cable route changes and the screening effects from intervening landform, built-form and / or vegetation, even in the winter.

Visual receptors

Recreational routes

National Routes:
- South Downs Way National Trail.

Local Routes:
- Monarch Way

PRoW within 1km and ZTV:
2089/2, 2092, 2108/1, 2173, 2174, 2174/1, 2175, 2180/1, 2185, 2186, 2187, 2187/1, 2188, 2190, 2191, 2208, 2208/1, 2208/2, 2209, 2210, 2211, 2260, 2260/1, 2262, 2263, 2264, 2282, 2282/1, 2623, 2665, 2666, 2671/1, 2683, 2684, 2686, 2689, 2691, 2697, 2698, 2699, 2703, 3181.

There will be Negligible to Zero visibility from other recreational routes beyond 1km due to screening from intervening landform, built-form and / or vegetation, even in the winter.

Recreational and tourist destinations

- Open Access Land at Barpham Hill,
- Open Access Land at Patching Hill;
- Open Access Land at Chantry and Sullington Hills;
- Open Access Land at Washington Common; and
- Open Access Land at Chanctonbury Hill.

A number of hilltops (landmarks) as identified in the Land Use Consultants (2015) *South Downs National Park View Characterisation and Analysis* (Viewshed Study Report) have been included in the assessment in agreement with the SDNPA. Some of these are beyond the LVIA Study Area and include:

- Arundel Castle;
- Chantry Hill;
- Sullington Hill; and
- Chanctonbury Ring.

Open Access Land at Perry Hill is outwith the ZTV and would have no visibility of the onshore cable corridor.

There will be Low to Negligible or no visibility of the onshore cable corridor from Crossbush Caravan Park, Arundel Castle, Arundel Wetland Centre, and Arundel Park and associated Open Access Land, which are now outwith the LVIA Study Area due to onshore cable route changes and the screening effects of intervening vegetation, built-form and / or landform.

Part 3: SDNP to Oakendene / Bolney

Settlements

- Wiston;
- Ashurst;
- Partridge Green;

Visual receptors

- Shermanbury; and
- Wineham.

There will be Negligible to Zero visibility of the onshore cable corridor from other settlements within 2km including Storrington, Henfield, Cowfold, Crosspost, Twineham Green, and Twineham due to the screening effects of intervening vegetation, built-form and / or landform. Other settlements (including Ashington and Bolney) are outwith the LVIA Study Area.

Transport routes

- Water Lane, Wiston;
- Spithandle Lane;
- B2135;
- B2116;
- A281;
- Kings Lane;
- Kent Street;
- Wineham Lane; and
- Bob Lane.

There will be Negligible to Zero visibility of the onshore cable corridor from other transport routes within 2km including roads within Henfield and Storrington, and the B2116 due to screening from intervening landform, built-form and / or vegetation, even in the winter.

There will be Negligible to Zero / no visibility of the onshore cable corridor from other transport routes (including Bolney Chapel Road and Fryland Lane) which were previously assessed at PEIR (RED, 2021) and are outwith the LVIA Study Area due to onshore cable route changes and the screening effects from intervening landform, built-form and / or vegetation, even in the winter.

Recreational routes

- National Routes:
- Sustrans Cycle Route 223 (also Downs Link).

- Local Routes:
- Downs Link (also Sustrans Cycle Route 223 and PRoW 3514).

PRoW within 1km and ZTV:
1T, 8T, 34Bo, 36Bo, 1730, 1774, 1775, 1776/1, 1777, 1781, 1782, 1783, 1784, 1786, 1787, 1788, 1789, 2604, 1841, 2208, 2372, 2372/1, 2372/2, 2374, 2514, 2519, 2520, 2525, 2530, 2531, 2583/2, 2587, 2588, 2589/1, 2594, 2614, 2616, 2617, 2709, 2710, 2711, 2800, 3200, 3514, 3517.

There will be Negligible to Zero visibility of the onshore cable corridor from other recreational routes within 2km including group of PRoW around Storrington, PRoW along River Adur, PRoW north and west of

Visual receptors

Henfield, due to screening from intervening landform, built-form and / or vegetation, even in the winter.

Recreational and tourist destinations

- Washington Caravan Park;
 - Open Access Land at Horsebridge Common; and
 - Bines Green.

There will be Negligible to Zero visibility of the onshore cable corridor from other recreational and tourist destinations within 2km including Wineham Lane Caravan Park.

Other recreational receptors

- 18.6.48 The Rivers Arun and Adur are important recreation assets and both will be crossed by the onshore cable corridor. The River Arun will be crossed about 2km from the coast at Littlehampton. The western fork of the River Adur will be crossed about 2km south of Partridge Green, west of Henfield. Both rivers host annual swimming events and are both also recognised as kayaking/ canoeing rivers, though they are both heavily tidal – restricting canoeing opportunities. Angling also takes place along both rivers. Both rivers have PRoW following one or both banks, and effects on users of these rivers are therefore included as part of the PRoW assessment in [Appendix 18.4: Visual assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.4)).
- 18.6.49 There are a number of areas of Registered Common Land within the LVIA Study Area including Horsebridge Common and Bines Green, which overlap with the B2135 and are therefore included as part of the onshore cable corridor assessment.
- 18.6.50 Other areas of Registered Common Land within the LVIA Study Area include unnamed common and The Pond at Climping, Broad Green Waster at Tortington, Washington Common, Sullington Warren, at Ashurst, Henfield Common, and Blackland Common. All of these are outwith the ZTV or would have **no view** of the onshore elements of the Proposed Development, and therefore excluded from further assessment.

Future baseline

- 18.6.51 Landscape change is an ongoing and inevitable process and will continue across the LVIA Study Area irrespective of whether the Proposed Development proceeds. Change could arise through natural processes (for example, the maturity of woodlands) and natural systems (for example, river erosion) or as a result of human activity including land use and land management.
- 18.6.52 Reference to the Arun, Horsham and Mid-Sussex Local Development Plans indicate strategic and economic growth within their districts which is likely to affect various settlements and in particular the Lower Arun Valley around the urban fringes of Littlehampton where the landscape is changing from rural to urban. Similarly, the landscape around the National Grid Bolney substation is subject to a

number of energy related development indicating high levels of landscape change in this area. In contrast, although the South Downs Local Plan (SDNPA, 2019) indicates a number of housing sites within its boundary, the landscape character within the SDNP is likely to be subject to a degree of permanence.

- 18.6.53 The Lyminster Bypass will be completed in 2024 and has also been included in the future baseline.
- 18.6.54 The published profile report for all five NCAs within the LVIA Study Area reports on a number of drivers of change, particularly on climate change, which may also alter the existing landscape and visual baseline within the surrounding area. However, long-term changes as a result of climate change are unpredictable, and the LVIA is undertaken against the current baseline, which has assumed that existing vegetation (trees, woodland and hedgerows) will continue to be managed in their current condition throughout the assessment period.

18.7 Basis for ES assessment

Maximum design scenario

- 18.7.1 Assessing using a parameter-based design envelope approach means that the assessment considers a maximum design scenario whilst allowing the flexibility to make improvements in the future in ways that cannot be predicted at the time of submission of the DCO Application. The assessment of the maximum adverse scenario for each receptor establishes the maximum potential adverse impact and as a result impacts of greater adverse significance would not arise should any other development scenario (as described in [Chapter 4: The Proposed Development, Volume 2](#) of the ES) (Document Reference: 6.2.4) to that assessed within this Chapter be taken forward in the final scheme design.
- 18.7.2 The maximum parameters and assessment assumptions that have been identified to be relevant to landscape and visual impact are outlined in [Table 18-24](#) and are in line with the Project Design Envelope ([Chapter 4: The Proposed Development, Volume 2](#) of the ES) (Document Reference: 6.2.4).
- 18.7.3 These maximum assessment assumptions are relevant to the assessment of effects on LVIA receptors undertaken at PEIR (RED, 2021) and ES.

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Table 18-24 Maximum parameters and assessment assumptions for impacts on landscape and visual impact

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
Construction	<p>Landfall</p> <ul style="list-style-type: none"> • Temporary construction compound 120m x 100m. • It is assumed that the tallest elements will be the mechanical excavator which has been modelled to a maximum height of 6m (fully extended). • Up to four horizontal directional drilling (HDD) drills. • Up to four transition bays. • Lighting will be limited to local task lighting and vehicle lighting to be used in poor weather / light conditions during the core working hours (07:00 to 19:00 Monday to Friday and 08:00 to 13:00 on Saturdays) positioned to minimise effects on residents and walkers. • Total construction period and installation duration up to 24 months. 	<p>These elements of the works at the landfall will be visible temporarily during the construction phase.</p>
Construction	<p>Onshore cable corridor</p> <p>Onshore cable corridor length approximately 38.8km.</p> <ul style="list-style-type: none"> • It is assumed that the tallest elements will be the mechanical excavator which has been modelled to a maximum height of 6m (fully extended). • The onshore temporary construction corridor width will be up to 40m. • The permanent corridor width (easement) will be up to 25m (and may need to be increased at HDD and Joint Bays). • Up to four trenches and up to 20 cables and ducts (including fibre optics). 	<p>These elements of the works will be visible temporarily during the construction phase and for a temporary period after the trench pathway may be visible as</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
	<ul style="list-style-type: none"> ● Burial depth minimum 1.2m standard cover to top of duct and maximum (for HDD) 25m (trees within the HDD corridor will be retained). ● A minimum of 27 trenchless (HDD) crossing locations with HDD compounds 50m x 75m. Other trenchless methodologies to be considered could include auger boring and micro-tunnelling. ● Up to 66 joint bays with temporary construction compounds 4m x 14m – construction duration 6-8 weeks. ● Total of five temporary construction compounds: <ul style="list-style-type: none"> ▶ Climping Compound– 61,300m² (6.13ha) ▶ Washington Compound– 39,100m² (3.91ha) ▶ Oakendene substation compound – 25,000m² (2.5ha) ▶ Oakendene West compound– 50,000m² (5ha) ▶ Existing National Grid Bolney substation compound – AIS 0.63ha / GIS 0.35ha. ● Temporary roadway width – up to 6m. ● Approximately 65,000 HGV construction traffic movements (two-way) across onshore cable corridor over the construction period. Further information is provided in Chapter 23: Transport, Volume 2 of the ES (Document Reference: 6.2.23). ● Lighting will be limited to local task lighting and vehicle lighting to be used in poor weather / light conditions during the core working hours (07:00 to 	<p>reinstated vegetation grows.</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
	<p>19:00 Monday to Friday and 08:00 to 13:00 on Saturdays) positioned to minimise effects on residents and walkers.</p> <ul style="list-style-type: none"> Total construction period and installation duration up to 3.5 years (approximately 150m per day with 4 trenches) <p>In addition, reinstated areas will be subject to the Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan and Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) that will include new and replacement / compensatory landscape planting along the reinstated onshore cable corridor, temporary construction compounds and accesses as described in Section 18.7.</p>	
Construction	<p>Onshore substation: Oakendene onshore substation</p> <ul style="list-style-type: none"> Overall footprint for the onshore substation – approximately 16.2 hectares (ha). Permanent area of site for all infrastructure – up to 6ha. Temporary works area – up to 2.5ha. Maximum number of buildings – 12. Maximum length building – 70m. Maximum width of building – 20m. Maximum heights: <ul style="list-style-type: none"> Lightening protection mast - 18m height. 	<p>These elements of the works will be visible temporarily during the construction phase. See operation and maintenance phase for enduring maximum assessment assumptions as the onshore substation infrastructure will be in place above</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
	<ul style="list-style-type: none"> ▶ Maximum main building / equipment height – 12.5m . ▶ Height of fire walls - 10m height. ● Key construction activity: <ul style="list-style-type: none"> ▶ Mechanical excavators maximum height of 6m (fully extended). ▶ Mobile crane maximum height 44m fully extended. ▶ Concrete / cement bound sand batching plant 20m height. ● Lighting will be limited to local task lighting and vehicle lighting to be used in poor weather / light conditions during the core working hours (07:00 to 19:00 Monday to Friday and 08:00 to 13:00 on Saturdays) positioned to minimise effects on residents and walkers. ● Total construction period (3 years) and installation duration within overall construction period up to 4 years. <p>In addition, perimeter areas of the site will be subject to the Appendix D Oakendene onshore substation Indicative Landscape Plan within the DAS (Document Reference: 5.8) and Outline LEMP (Document Reference: 7.10) that will include earthworks, SUDS and planting as described in Section 18.7.</p>	ground level permanently.
Construction	<p>Onshore substation: National Grid Bolney Substation Extension (AIS / GIS)</p> <ul style="list-style-type: none"> ● Permanent area of site for all infrastructure – up to 0.63ha / 0.35ha. ● Temporary works area – up to 0.72ha / 0.72ha. 	These elements of the works will be visible temporarily during the construction phase. See operation and maintenance phase

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
	<ul style="list-style-type: none"> ● Maximum number of buildings – 2 / 1. ● Maximum length building – 12m / 35m. ● Maximum width of building – 3m / 20m. ● Maximum heights: <ul style="list-style-type: none"> ▶ Maximum building / equipment height – 3m / 12m. ● Key construction activity: <ul style="list-style-type: none"> ▶ Mechanical excavators maximum height of 6m (fully extended). ▶ Mobile crane maximum height 44m fully extended. ▶ Concrete batching plant 20m height. ● Lighting will be limited to local task lighting and vehicle lighting to be used in poor weather / light conditions during the core working hours (07:00 to 19:00 Monday to Friday and 08:00 to 13:00 on Saturdays) positioned to minimise effects on residents and walkers. ● Total construction period (12 months) and installation duration within overall construction period up to 4 years. <p>In addition, perimeter areas of the site will be subject to the Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan within the DAS [REP3-013] and Outline LEMP [REP4-047] that will include earthworks, SUDS and planting as described in Section 18.7.</p>	<p>for enduring maximum assessment assumptions as the existing National Grid Bolney substation extension infrastructure will be in place above ground level permanently.</p>
<p>Operation and maintenance</p>	<p>Landfall and onshore cable corridor</p>	<p>It should be noted that joint bays will</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
	<ul style="list-style-type: none"> No above ground infrastructure. The permanent corridor width (easement) will be up to 25m (and may need to be increased at HDD and Joint Bays). New, replacement / compensatory landscape planting will be established and maintained. 	<p>be underground – there will be no surface infrastructure except for a manhole cover flushed at ground level.</p>
Operation and maintenance	<p>Onshore Substation: Oakendene onshore substation</p> <ul style="list-style-type: none"> As per construction phase, excluding temporary works area – 2.5ha and height of mechanical excavator. The perimeter landscape estate will be subject to establishment and management / maintenance, as described in Outline LEMP [REP4-047] and Section 18.7. External lighting will be directional and limited to essential security and safety requirements. External works will usually be scheduled during daylight hours. If night working is required then portable directional task lighting will be deployed. 	<p>This chapter assesses the effect on landscape elements, character and designated landscapes, and visual amenity owing to the presence of the onshore substation. These maximum assessment assumptions are relevant to the assessment of effects on LVIA receptors undertaken at PEIR (RED, 2021) and ES.</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
Operation and maintenance	<p>National Grid Bolney Substation Extension (AIS / GIS)</p> <ul style="list-style-type: none"> As per construction phase, excluding temporary works area – 0.72ha / 0.72ha and height of mechanical excavator. The perimeter landscape estate will be subject to establishment and management / maintenance, as described in Outline LEMP [REP4-047] and Section 18.7. <p>External lighting will be directional and limited to essential security and safety requirements. External works will usually be scheduled during daylight hours. If night working is required, then portable directional task lighting will be deployed.</p>	<p>This chapter assesses the effect on landscape elements, character and designated landscapes, and visual amenity owing to the presence of the onshore substation. These maximum assessment assumptions are relevant to the assessment of effects on LVIA receptors undertaken at PEIR (RED, 2021) and ES.</p>
Decommissioning	<p>Landfall and onshore cable corridor</p> <p>Onshore electrical cables will be left in-situ with ends cut, sealed and buried.</p>	<p>There will be no decommissioning of the landfall and onshore cable corridor at the end of their operational life as the electrical cables will be left in-</p>

Project phase and activity / impact	Maximum parameters and assessment assumptions	Justification
Decommissioning		situ to minimise the landscape and visual effects associated with removal.
Decommissioning		Onshore substation: Oakendene onshore substation If fully decommissioned, then as per construction phase.
Decommissioning		National Grid Bolney Substation Extension (AIS / GIS) If fully decommissioned, then as per construction phase.

- 18.7.4 The assessment of effects in this ES takes into consideration the optionality that exists for flexibility at this stage of the design of the Proposed Development (as outlined in **Chapter 5: Approach to EIA, Volume 2** of the ES (Document Reference: 6.2.5)).
- 18.7.5 Therefore, effects that are more significant than those presented in this ES are not predicted to occur should any other development scenario within the maximum design envelope be taken forward in the final design of the Proposed Development.

Embedded environmental measures

- 18.7.6 As part of the Rampion 2 design process, a number of embedded environmental measures have been adopted to reduce the potential for impacts on landscape and visual impact. These embedded environmental measures have evolved over the development process as the EIA has progressed and in response to consultation.
- 18.7.7 These measures also include those that have been identified as good or standard practice and include actions that would be undertaken to meet existing legislation requirements. As there is a commitment to implementing these embedded environmental measures, and also to various standard sectoral practices and procedures, they are considered inherently part of the design of Rampion 2 and are set out in this ES.
- 18.7.8 **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** and **Appendix D Oakendene onshore substation Indicative Landscape Plan** has been provided within the **DAS** (Document Reference: 5.8) to mitigate landscape and visual as well as other environmental effects and where possible enhance landscape quality through use of sustainable landscape design techniques involving earthworks, SUDs, soft / hard landscaping including, but not limited to planting (trees, hedges and woodland), outline architectural strategy (building colours and materials) lighting details (emergency and intruder lighting) and perimeter fencing. **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** and **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) will take account of the West Sussex Landscape Land Management Guidelines and Landscape Character Assessment of West Sussex (West Sussex Council, 2003) (C-68, **Table 18-25**).
- 18.7.9 Landfall and onshore cable corridor: Embedded measures
- The entire onshore cable corridor will be completely buried underground (C-1);
 - reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction (C-1, C-2, C-3, C-6, C-9, C-113 and C-128, **Table 18-25**), including location and design of construction/HDD compounds and construction access provision through iterative design and EIA;
 - reduction to the working width of the onshore cable corridor at sensitive locations to protect landscape elements where practical notching vegetation and trenchless technology will be used in some locations such as roads and rivers (C-5, C-20, C-114 and C-115, **Table 18-25**);

- developing phasing (**Table 18-25**) to reduce the amount of time trenches need to be open (C-19), with typically 600m – 1,000m of onshore cable corridor between cable route joint bays/pits, particularly in the SDNP, allowing for quicker backfilling and progressive/early restoration and reinstatement of the landscape with all construction areas re-instated to pre-existing conditions as far as practical (C-7, C-27 and C-128, **Table 18-25**);
- soil storage and handling will accord with Department for Environment, Food and Rural Affairs (Defra) *Code of Construction Practice (COCP) for the Sustainable Use of Soils on Construction Sites PB13298* (Defra, 2009) (C-11, C-12, C-13, C-29, C-130, C-132 and C-133, **Table 18-25**);
- avoid removing landscape elements, particularly where these are key characteristics and or veteran or mature trees, woodland and hedgerows as far as practical. A number of these will also have ecology / nature conservation and/or heritage value (C-21, C-115 and C-174, **Table 18-25**);
- ensure remaining vegetation is protected in accordance with BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction* (BSI, 2012) where required (C-21, **Table 18-25**);
- develop stage specific LEMPs in accordance with the **Outline LEMP** (Document Reference: 7.10) to reinstate landscape elements such as trees, woodland and hedgerows, which have been removed as a result of construction, including temporary construction / HDD compounds and temporary construction access (C-196, **Table 18-25**);
- re-instate all vegetation (trees, woodland and hedgerows) removed during the construction process as far as possible (noting that only hedges can be planted within the onshore substation and onshore cable corridor easements). This includes trees and woodland removed to allow for temporary construction compounds or access and or the provision of visibility splays (C-115, C-165, **Table 18-25**);
- trees and woodland removed as a result of the onshore cable corridor will be reinstated by new planting elsewhere within the proposed DCO order limits as far as possible and attention will also be given to maintaining levels and types of vegetation and landscape patterns within each LCA to avoid any long-term adverse landscape effects (C-196, **Table 18-25**). Rampion 2 will make best endeavours, noting that this effort is subject to landowner agreement; and
- ensure all new planting is established within 5 years and appropriate maintenance and management plans provided for 10 years (C-199, **Table 18-25**).

Additional embedded environmental measures in respect of the SDNP

- 18.7.10 From an overall design perspective, the extent of construction activity within the SDNP has been limited as far as possible to avoid the most sensitive locations such as ancient woodland, the brows of hills and to have due regard to landscape patterns for example field boundaries (C-67, **Table 18-25**) where possible and the temporary construction compounds and the onshore substation search areas are all outwith the SDNP boundary. A key commitment of relevance to this impact

assessment is C-66 (**Table 18-25**) which aims to minimise effects on the special qualities of the SDNP and the High Weald AONB through careful design consideration and planning in respect of the construction process and activity, taking account of the relevant policy and guidance. A number of other commitments are relevant to the SDNP as set out in the **Commitments register** (Document Reference: 7.22).

Public Rights of Way and Open Access Land

- 18.7.11 All PRoW (including the South Downs Way National Trail) will be subject to a crossing schedule that will limit diversions (C-18, C-162, and C-168, **Table 18-25**) and the South Downs Way and Downs Link will be managed to minimise any closures or diversions (C-161, **Table 18-25**). Temporary signage for diversions will be provided during construction (C-32, **Table 18-25**) and any damage recorded via a condition survey will be repaired (C-163, **Table 18-25**).
- 18.7.12 A Code of Construction Practice (CoCP) will be adopted to minimise temporary disturbance to residential properties, recreational users and existing land users (C-33, C-157, **Table 18-25**).

Construction lighting

- 18.7.13 The SDNP is also an International Dark Sky Reserve and Local Plan Policy SD8: Dark Night Skies includes specific lighting requirements for developers (SDNPA, 2019).
- 18.7.14 In order to avoid construction lighting where possible, construction work will be limited to between 07:00 to 19:00 hours Monday to Friday and 08:00 to 13:00 hours on Saturday with only exceptional activities occurring on Sundays and public / bank holidays (C-200, **Table 18-25**). Although the detail of any lighting design for all temporary and permanent lighting will be developed once contractors are appointed, the principles of any lighting regime are set out in **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4). Where required, construction lighting will be limited to directional task lighting positioned to minimise glare and nuisance to residents and walkers within the SDNP and informed by BS EN 12464-2:2014 Lighting of outdoor work places (BSI, 2014) and guidance provided by the CIBSE Society of Light and Lighting, The Bat Conservation Trust, the Institution of Lighting Professionals and Dark Skies Technical Advice Note (South Downs National Park Authority, 2021).
- 18.7.15 A detailed list of the embedded environmental measures is set out in the **Commitments register** (Document Reference: 7.22) which explains how and where particular environmental measures will be implemented and secured. A large number of these relate to the landscape. These measures will all be secured via Development Consent Order (DCO) where control documents are identified, they provide additional information as to how commitments will be applied during construction and operation (as applicable).
- 18.7.16 .
- 18.7.17 A summary of some of the main commitments related to the LVIA is provided in **Table 18-25**.

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Table 18-25 Relevant landscape and visual impact embedded environmental measures

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-1	The onshore cable route will be completely buried underground for its entire length.	Scoping	Development Consent Order (DCO) Works Plans onshore (Document Reference: 2.2), description of development and requirements	This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall.
C-2	Cables will be installed in ducting.	Scoping	DCO Works Plans onshore (Document Reference: 2.2), description of development and requirements	This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.
C-5	Trenchless crossings will be provided for features where identified in Appendix A - Crossing Schedule of the Outline Code of Construction Practice.	Scoping – updated at PEIR	DCO Works Plans onshore (Document Reference: 2.2) and order limits	This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.
C-6	Where practical, sensitive sites will be avoided by the temporary and permanent onshore project footprint including SSSIs, Local Nature	Scoping – updated at PEIR	DCO Works Plans onshore (Document Reference: 2.2.2) and order limits	This measure will protect sensitive sites and reduce as far as practical the landscape and visual effects of the

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-7	Reserves, Local Wildlife Sites, ancient woodland, areas of consented development, areas of historic and authorised landfills and other known areas of potential contamination, National Trust Land, Listed Buildings, Scheduled monuments, and mineral resources (including existing mineral sites, minerals sites allocated in development plans and mineral safeguarding areas).	Scoping – updated at PEIR	Outline Code of Construction Practice (CoCP) (Document Reference: 7.2) and DCO requirement	onshore elements of the Proposed Development.
	Post construction, reinstatement of agricultural land, or other areas of 'soft' land use where the natural soil profile is present, will be to pre-existing conditions and if remaining in agricultural use, to the original ALC grade, except where a permanent at or above ground structure including the transition joint bay, joint bays and the onshore substation and related access, landscape and drainage works are required (including over the onshore cable ducts). This will be completed in accordance with the Materials Management Plan (MMP) (C-69) and			This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>Defra 2009 Code of Construction Practice for the Sustainable Use of Soils on Construction Sites PB13298. The stage specific Soil Management Plan(s) (SMP(s)) are to be used in conjunction with the MMP (and Soil Resource Plan – which will be integrated with and may form a sub-section of the MMP) to maximise the restoration of excavated soils to their pre-existing condition and location, and if this is not possible, to maximise the reuse of soils within the Proposed Development, minimising soils being relocated outside the Proposed Development or becoming waste.</p>			
C-9	<p>Joint bays will be completely buried, with the land above reinstated to pre-construction ground level, with the exception of link box chambers where access will be required from ground level (via manholes). Once constructed joint bays and link box chambers will be resilient to flooding.</p>	<p>Scoping – updated at PEIR</p>	<p>DCO Works Plans onshore (Document Reference: 2.2.2), description of development and requirements</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-11	<p>During construction, topsoil and subsoil will be stored within the temporary working corridor of the onshore cable. The topsoil and subsoil will be segregated and stored in line with Defra 2009 Construction Code of Practice for the Sustainable Use of Soils on Construction Sites PB13298, including guidance on utilising separate stockpiles and giving due consideration to adverse weather conditions. Any suspected or confirmed contaminated soils will be separated, contained and tested before removed.</p>	<p>Scoping – updated at PEIR</p>	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>
C-12	<p>During topsoil stripping, machinery with low ground pressure will be used to minimise soil compaction where the soil conditions indicate that compaction is possible. Storage time will be kept to the practicable minimum to prevent the soil deteriorating in quality. Topsoil stripped from different fields will be stored separately, as will soil from hedgerow banks or woodland strips.</p>	<p>Scoping</p>	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-13	<p>In areas (or during periods of adverse weather) there may be the requirement to import aggregates to create a stable surface for construction traffic movements.</p> <p>Options such as bogmatting and geotextiles will be considered by the principal contractor for sensitive sections of the route to reduce impact. Selection of an appropriate measure to lower the risk of ground compaction will be made by a suitably trained / experienced person.</p>	Scoping	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>
C-18	<p>Appendix A Crossing Schedule of the Outline Code of Construction Practice includes the crossing methodology which will be used for each crossing of road, rail, public right of way (PRoW) and watercourse.</p>	Scoping	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>
C-19	<p>The onshore cable will be constructed in discrete sections. The trenches will be excavated, the cable ducts will be laid, the trenches backfilled, and the reinstatement process commenced in as</p>	Scoping	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>short a timeframe as practicable. At regular intervals (typically 600m – 1,000m) along the cable route joint bays/pits (and associated ancillary infrastructure including link and communication boxes) will be installed to enable the cable installation and connection jointing process. The stage specific CMS will set out a protocol for the reinstatement of land used temporarily for construction including the timing in accordance with C-103.</p>			
C-20	<p>The typical construction working area will be 40m along the onshore cable corridor to minimise the construction footprint. At other discrete locations this may be expanded to accommodate working area for example for Horizontal Directional Drilling (HDD).</p>	Scoping	<p>Outline CoCP (Document Reference: 7.2) and DCO articles/ requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>
C-21	<p>Where vegetation removal is necessary, it will be scheduled over winter to avoid the bird breeding season. If not possible for all areas, any vegetation removal will be undertaken in line with British Standard (BS) 5837:2012 (Trees in</p>	Scoping – updated at PEIR	<p>Outline CoCP (Document Reference: 7.2) and DCO articles/ requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-22	<p>relation to design, demolition and construction). This will be carried out under supervision and will be appropriately managed to remove the risk of damaging or destroying active nests, young or eggs. Suitable methods will also be used to ensure vegetation supporting other legally protected species is removed sensitively and in a legally compliant way.</p>	Scoping	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	and safety inspections and plant maintenance. Such activities shall not include noise generating activity including use of heavy plant or activity resulting in impacts between objects resulting in loud noises, ground breaking or earthworks.			
C-27	Following construction, construction compounds will be returned to previous conditions as far as reasonably possible. C7 applies in this regard for reinstatement of soils.	Scoping – updated at PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-29	A depth of cover of 1.2m is assumed. Deeper trenches may be required at specific crossing locations (such as watercourses).	Scoping - updated at PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.
C-32	Signage and / or temporary public rights of way (PRoW) / footpath diversions will be provided during construction.	Scoping	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-33	Stage specific CoCPs will include measures to minimise temporary	Scoping	Outline CoCP (Document Reference:	This measure will reduce as far as practical the landscape and visual

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	disturbance to residential properties, recreational users and existing land users. It will include details of measures to protect these receptors including the use of screen fencing at the temporary construction compounds to contribute to minimising visual and noise impacts..		7.2) and DCO requirement	effects of the onshore elements of the Proposed Development.
C-66	<p>The Proposed Development has sought to minimise effects on the special qualities of the South Downs National Park and High Weald Area of Outstanding Natural Beauty (AONB) through careful design consideration in terms of scale, size and location, and taking account of the relevant policy and guidance.</p> <p>Further consideration of the special qualities during detailed design of the onshore cable corridor will be provided in accordance with C-292.</p>	Scoping	DCO Works Plans onshore (Document Reference: 2.2.2), description of development and requirements	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-67	The onshore cable route will avoid the brows of hills as far as is reasonably practical and is likely to follow the established pattern of the landscape i.e. routed to closely follow the line of	Scoping	DCO works plans, description of development and requirements	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-68	<p>existing field boundaries as far as is practicable.</p> <p>The final form of the onshore substation will be finished to a high standard of design, using quality materials and integrated into the surrounding environment through the adoption of a robust, sustainable landscape planting strategy, taking account of the West Sussex Landscape Land Management Guidelines and Landscape Character Assessment of West Sussex (West Sussex Council, 2003) detailed landscape plan will be developed to mitigate landscape and visual effects and where possible, protect landscape character, key characteristics and elements, and enhance landscape quality through use of sustainable landscape design techniques. The detailed landscape plan will be developed in accordance with further principles and indicative landscape design included in the Design and Access Statement.</p>	Scoping – updated at ES	<p>Outline LEMP (Document Reference: 7.10) and DCO requirement</p>	This measure will reduce as far as practical the landscape and visual effects of the onshore substation.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-111	A decommissioning plan will be prepared for the project in line with the latest relevant available guidance.	PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore substation.
C-112	No ground-breaking activity or use of wheeled or tracked vehicles will take place south of the seawall (above mean high water springs) within Climping Beach Site of Special Scientific Interest (SSSI). Within Littlehampton Golf Course and Atherington Beach Local Wildlife Site (LWS) vehicular access will be restricted to a low pressure rig for ground investigation purposes only during the site preparation works. Should remedial action be required in the unlikely event of a drilling fluid breakout access would be taken immediately to ensure drilling fluid can be contained and removed. Reinstatement and compensation measures would then be discussed and agreed with Natural England. This approach will be detailed in the Pollution	PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>Incident Response Plan secured through Requirement 22(4)(j) that will be agreed with the relevant planning authority in consultation with the Environment Agency and the statutory nature conservation body.</p>			
C-114	<p>No ground-breaking activity or use of wheeled or tracked vehicles will take place during the construction phase within Sullington Hill LWS unless remedial action is required. Any predicted activity will be restricted to foot access for the purpose of surveying and monitoring of the progress of the horizontal directional drill (HDD). The existing farm tracks through Sullington Hill LWS may be used by light vehicles (e.g. 4 x 4, light van) for access purposes during the operation and maintenance phase.</p>	PEIR - updated at ES	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor.</p>
C-115	<p>Hedgerows/tree lines crossed by the cable route will be 'notched' to reduce habitat loss and landscape and heritage impacts wherever possible. This is defined as removing one or more short</p>	PEIR – updated at ES	<p>Outline CoCP (Document Reference: 7.2 and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>sections (i.e. notches) within the same hedgerow/tree line. The removed sections will by default be replanted except where permanently lost on the Vegetation Retention and Removal Plan (see Figure 7.2.1 Vegetation Retention and Removal Plans - Hedgerows and tree lines in the Outline - Vegetation Retention and Removal Plan). Where appropriate, hedgerows will be temporarily translocated to maintain diversity and structure and result in more rapid reinstatement. Hedgerow/tree line losses will be kept to approximately 14m total width at each hedgerow crossing point where notching can take place. For hedgerows deemed "important" under the Hedgerows Regulations 1997 (or where there are other considerations), losses will be reduced to a 6m notch for the temporary construction haul roads only, by trenchless installation of the cable ducts under them wherever possible (see Figure 7.2.1 Vegetation Retention and Removal Plans - Hedgerows and tree</p>			

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-128	<p>lines in the Outline -Vegetation Retention and Removal Plan for the extent of hedgerow losses at each location). Hedgerows subject to temporary Translocation will be lifted using a tree spade to maintain diversity and structure and result in more rapid reinstatement. Where chances of success are questionable, notches will be made by removal and reinstatement through planting. The ECoW will justify the approach being taken in line with the responsibilities of implementing the Outline Vegetation Retention and Removal Plan (see C-220). Reinstated hedgerows and tree lines will be monitored over a period of 10 years, and remedial action taken rapidly where signs of failure are identified.</p>	PEIR	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore cable corridor.</p>
	<p>Any temporary crossings will be in place for the minimal time possible.</p>			

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-130	During construction, no soil stockpiles will be stored within 8m of Ordinary Watercourses, within 8m of a non-tidal Main River, and within 16m of a tidal Main River.	PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-132	Soil stockpiles in the tidal floodplain will have regular gaps to prevent floodplain compartmentalisation. Soil stockpiles would have a maximum bund to gap ratio of 4: 1. The worst case scenario continuous length of embankment would be up to 80m, i.e. with 20m gaps at 80m intervals.	PEIR – updated at ES.	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-133	Stockpiles will be present for the shortest practicable timeframe, with stockpiles being reinstated as the construction work progresses in order to minimise areas of exposed soil and any associated silt laden run-off. Topsoil stockpiles which are anticipated to remain for more than six months will be seeded as soon as practicable to encourage stabilisation, except where the existing seed bank is to be used in reinstatement.	PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-157	The proposed heavy goods vehicle (HGV) routing during the construction period to individual accesses will be developed to avoid major settlements such as Storrington, Cowfold, Steyning, Wineham, Henfield, Woodmancote and other smaller settlements where possible. For Cowfold, this means that HGVs will only route through the village centre for trips related to accesses A-56 and A-57 or where use of local sourced materials / equipment makes its avoidance impracticable.	PEIR	Proposed routing in agreed Outline Construction Traffic Management Plan (CTMP) (Document Reference: 7.6)	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-161	The South Downs Way and the Downs Link Public Rights of Ways (PRoWs) will be managed in a way that minimises any closures or diversions.	PEIR	Outline Public Rights of Way Management Plan (PRoWMP) (Document Reference: 7.8)	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-162	Public Rights of Ways (PRoWs) that cross the onshore cable corridor will be managed or diverted over the shortest distance possible with potential to provide adjacent crossings.	PEIR	Outline PRoWMP (Document Reference: 7.8)	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-163	Public Rights of Way (PRoW) condition surveys will be undertaken before, during and after the construction phase. If damage has been identified during the construction phase, the damage will be repaired. Post-construction, all PRoWs will be returned to their pre-construction condition.	PEIR	Outline PRoWMP (Document Reference: 7.8)	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-165	Construction access will be provided with visibility splays designed to Design Manual for Roads and Bridges (DRMB) design standards as agreed with West Sussex County Council (WSCC).	PEIR	Outline CTMP (Document Reference: 7.6) - Requirement, order limit plans, access plans	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-174	Veteran trees are retained through design avoidance. Ground works within a buffer zone of 15 times the diameter of the tree or 5m from the edge of the tree's canopy will be avoided. Should transmission cables go under a veteran tree via a trenchless crossing a depth of at least 6m below ground within the buffer zone will be maintained to avoid root damage.	PEIR	Embedded into design	This measure will protect veteran trees and reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
C-196	Stage specific LEMPs, developed in accordance with the Outline LEMP will be developed to reinstate landscape elements such as trees, woodland and hedgerows, which have been removed as a result of construction, including construction / HDD compounds and construction access. Attention will also be given to maintaining levels and types of vegetation and landscape patterns within each Landscape Character Area.	PEIR	Outline LEMP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-199	A stage specific Landscape and Ecology Management Plan will be developed to ensure all reinstated habitats are effectively established. To ensure effective restoration, habitats will be subject to appropriate maintenance, management (including adaptive management) and monitoring for ten years from the completion of planting in the relevant stage.	PEIR	Outline LEMP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-200	Where required, construction lighting will be limited to directional task lighting positioned to minimise impacts to residents and walkers within the South	PEIR	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	Downs National Park and informed by BS EN 12464-2:2014 Lighting of outdoor workplaces, and guidance provided by the CIBSE Society of Light and Lighting, The Bat Conservation Trust and the Institution of Lighting Professionals and the Dark Skies Technical Advice Note (South Downs National Park Authority, 2021) and complied with as far as reasonably practicable and applicable to construction works.			
C-202	Public Rights of Way Management Plan (PRoWMP) will be developed in consultation with West Sussex County Council for stages of the works. These will be developed in accordance with the Outline PRoWMP and include the stage specific details for managing the use of PRoWs during construction.	PEIR – updated at ES.	PRoWMP (Document Reference: 7.8) and DCO requirement	This measure will reduce as far as practical the landscape and visual effects of the onshore elements of the Proposed Development.
C-216	All ancient woodland will be retained. A stand-off of a minimum of 25m from any surface construction works will be maintained in all locations from cable installation works. Construction traffic	ES	Outline CoCP (Document Reference: 7.2) and DCO requirement	This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>may operate within 25m of an ancient woodland on existing tracks, with any track maintenance works being restricted to the current width. Works to provide safe access from the highway are required in three locations within 25m of ancient woodland, being accesses A-42, A-56 and A-57. At these locations specific measures including dust control shall be detailed in the stage specific Code of Construction Practice that will manage any potential indirect effects on ancient woodland. Where ancient woodland is crossed via trenchless crossing a depth of at least 6m below ground will be maintained to avoid root damage and drill launch and retrieval pits will be at least 25m from the woodland edge.</p>			
C-220	<p>The Outline Vegetation Retention Removal Plan shows hedgerows, tree lines, woodland, scrub, calcareous grassland, semi-improved species-rich grassland and ponds which are to be retained or temporarily or permanently lost. Should any of these habitats shown</p>	ES	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will protect landscape elements and reduce as far as practical the landscape and visual effects of the onshore cable corridor and landfall construction.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to landscape and visual impact assessment
	<p>as retained require removal due to unforeseen circumstances at the detailed design phase, they will be highlighted to the relevant competent authority with a reasoned justification provided. The stage specific Vegetation Retention and Removal Plans will require approval of the relevant planning authority via Requirement 40 of the DCO. Any unforeseen, additional losses would be accounted for through commitment C-104 covering the commitment to the provision of biodiversity net gain.</p>			
C-254	<p>A detailed landscape plan will be developed in agreement with NGET for the screening of the extension works to the National Grid Bolney Substation in accordance with the further principles and Indicative Landscape Design included in the Design and Access Statement. The detailed landscape plan will be provided to Mid-Sussex District Council for approval.</p>	ES	<p>Outline CoCP (Document Reference: 7.2) and DCO requirement</p>	<p>This measure will reduce as far as practical the landscape and visual effects of the onshore substation.</p>

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18.8 Methodology for ES assessment

Introduction

- 18.8.1 The project-wide generic approach to assessment is set out in **Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference:6.2.5). The assessment methodology for landscape and visual impact for the ES is consistent with that provided in the Scoping Report (RED, 2020) and no changes have been made since the scoping phase and PEIR (RED, 2021) provided alongside Statutory Consultation. The LVIA and the SLVIA methodology also take a consistent approach and use the same terminology and methods.
- 18.8.2 A full description of the LVIA methodology is provided in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1). A full description of the SLVIA methodology is provided in **Chapter 15: Seascape, landscape and visual impact assessment, Volume 2** of the ES [APP-056].

Summary of LVIA Methodology

- 18.8.3 The assessment has been undertaken in accordance with the Landscape Institute and IEMA (2013) *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition (GLVIA3), and other best practice guidance listed in **Section 18.2**. A summary of the LVIA assessment methodology is provided below.
- 18.8.4 The landscape and visual effects (and whether they are significant) is determined by an assessment of the nature or 'sensitivity' of each receptor or group of receptors and the nature of the effect or 'magnitude of change' that will result from the onshore elements of the Proposed Development. The evaluation of sensitivity takes account of the value and susceptibility of the receptor to the onshore elements of the Proposed Development. This is combined with an assessment of the magnitude of change which takes account of the size and scale of the proposed change and the geographical extent. The duration and reversibility are stated separately in relation to the assessed effects. By combining assessments of sensitivity and magnitude of change, a level of landscape or visual effect can be evaluated and determined. The resulting level of effect is described in terms of whether it is significant or not significant and the type of effect is described as either direct or indirect; temporary or permanent (reversible); cumulative; and beneficial, neutral or adverse.
- 18.8.5 The assessment also considers the whole Proposed Development effects resulting from the onshore and offshore elements of the Proposed Development, and the cumulative effects with other similar developments to the onshore elements of the Proposed Development within the LVIA Study Area.
- 18.8.6 The time period for the assessment covers the construction phase of the onshore elements of the Proposed Development, their subsequent operation and the implementation and establishment of embedded landscape measures which are likely to overlap with the construction and or operation and maintenance phases.

- 18.8.7 The landscape and visual assessment unavoidably involves a combination of quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.
- 18.8.8 For the operation and maintenance phase, the assessment reports on the potential effects of the onshore elements of the Proposed Development at Year 1, Year 5 and Year 10. It is expected that any potential effects at Year 10 will be materially reduced by mitigation planting than those assessed at Year 1.
- 18.8.9 For the decommissioning phase, the assessment will assess a similar scenario to the construction phase in reverse. This means taking account of construction activity associated with decommissioning work and the reinstatement of the landscape to its pre-existing condition. Effects are likely to be similar during the construction phase of the onshore substation. Native planting undertaken as part of the **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** and **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) around the perimeter of the onshore Oakendene substation and the existing National Grid Bolney substation extension will be mature and will provide substantial screening of decommissioning activity.

Landscape Sensitivity Rating

- 18.8.10 An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The evaluation of landscape sensitivity is described as ‘High’, ‘Medium-high’ ‘Medium’ ‘Medium-low’ or ‘Low’ and is drawn from the consideration of a range of criteria that indicate landscape value and susceptibility. The basis for the assessment is made clear using evidence and professional judgement in the evaluation of sensitivity for each receptor. Criteria that tend towards higher or lower sensitivity are set out in **Table 18-26**.

Table 18-26 Landscape sensitivity to change

Value / Susceptibility criteria	Level of value/susceptibility ranging from ‘High’ to ‘Medium’ to ‘Low’		
<u>Value – Landscape Value is determined by consideration a range of indicators/criteria with examples as follows:</u>			
Designation	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Designated landscapes / elements with national policy level protection or defined for their natural beauty. Evidence that the landscape / element is valued or used substantially for recreational activity. </td> <td style="width: 50%; vertical-align: top;"> Landscapes without formal designation. Despoiled or degraded landscape with little or no evidence of being valued by the community. Elements that are uncharacteristic such as non-natives or self-seeded vegetation that may need to be cleared. </td> </tr> </table>	Designated landscapes / elements with national policy level protection or defined for their natural beauty. Evidence that the landscape / element is valued or used substantially for recreational activity.	Landscapes without formal designation. Despoiled or degraded landscape with little or no evidence of being valued by the community. Elements that are uncharacteristic such as non-natives or self-seeded vegetation that may need to be cleared.
Designated landscapes / elements with national policy level protection or defined for their natural beauty. Evidence that the landscape / element is valued or used substantially for recreational activity.	Landscapes without formal designation. Despoiled or degraded landscape with little or no evidence of being valued by the community. Elements that are uncharacteristic such as non-natives or self-seeded vegetation that may need to be cleared.		

Value / Susceptibility criteria	Level of value/susceptibility ranging from ‘High’ to ‘Medium’ to ‘Low’	
	High	Low
Quality	Higher quality landscapes / elements with consistent, intact and well-defined, distinctive attributes.	Lower quality and indistinct landscapes / elements or features that detract from its inherent attributes.
Rarity	Rare or unique landscape character types, features or elements.	Widespread or ‘common’ landscape character types, features or elements.
Aesthetic / scenic	Aesthetic / scenic or perceptual aspects of designated wildlife, ecological or cultural heritage features that contribute to landscape character.	Limited wildlife, ecological or cultural heritage features, or limited contribution to landscape character.
Perceptual qualities	Landscape with perceptual qualities of wildness, remoteness or tranquillity.	Limited or no evidence that the landscape is used for recreational activity.
Cultural associations	Landscape with strong cultural associations that contributes to scenic quality.	Landscape with few cultural associations.

Susceptibility – Landscape Susceptibility is determined by consideration a range of indicators / criteria with examples as follows:

Strength and robustness	Fragile landscape vulnerable and lacking the ability to accommodate change.	Robust landscape, able to accommodate change or loss of features without undue adverse effects.
Landscape Scale	A smaller scale landscape that may require further engineering to accommodate the onshore elements of the Proposed Development.	A landscape of a suitably large enough scale to accommodate the onshore elements of the Proposed Development.
Openness/ Enclosure	An open landscape with limited screening and higher susceptibility to the onshore elements of the Proposed Development.	An enclosed landscape with screening and lower susceptibility to the onshore elements of the Proposed Development.
Reinstatement	Higher value, characteristic landcover and elements that cannot be easily reinstated or replaced.	Lower value, non-characteristic landcover and elements capable of rapid reinstatement or replacement.

Value / Susceptibility criteria	Level of value/susceptibility ranging from 'High' to 'Medium' to 'Low'	
	High ←	→ Medium ←
Skyline	Distinctive undeveloped skylines with landmark features.	Developed, nondistinctive skylines.
Association	Weak and indirect association. Other development may be of a smaller scale or historic.	Strong or direct association other similar contemporary developments / landscape character.
Rationale	Landscape with numerous environmental and technical constraints and fewer environmental measures.	Strong landscape rationale and opportunity with high degree of design quality and/or environmental measures.
Perceptual Qualities	Perceptual qualities associated with particular scenic qualities, wildness or tranquillity.	Contemporary, cultivated / settled or developed landscapes are likely to have a lower susceptibility.
Landscape Context	Adjacent landscape character context connected by borrowed character and views.	Host landscape character is separate from surrounding / adjacent landscape character
<u>Sensitivity</u>	Sensitivity drawn from consideration of the above Value and Susceptibility criteria with the final conclusion on the level of Sensitivity ranging from 'High' to 'Medium' to 'Low'.	

Landscape Magnitude of Change Rating

- 18.8.11 The 'magnitude' or 'degree of change' resulting from the onshore elements of the Proposed Development is described as 'High', 'Medium-high', 'Medium', 'Medium-low', 'Low' or 'Negligible-Zero'. In assessing the magnitude of change, the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short / medium / long-term and temporary / permanent). The basis for the assessment of magnitude of change for each receptor will be made clear using evidence and professional judgement.
- 18.8.12 The levels of magnitude of change that can occur are defined in **Table 18-27**.

Table 18-27 Landscape magnitude of change ratings

Magnitude of landscape change	Examples of landscape magnitude
High	<ul style="list-style-type: none"> • Size / Scale – A large-scale change and major loss of key landscape elements / characteristics or the addition of large scale or numerous new and uncharacteristic features or elements that would affect the landscape character and the special landscape qualities / integrity of a landscape designation. Directly affecting a host landscape receptor or indirectly affecting a nearby receptor. • Geographical extent – The size or scale of change would typically, but not always affect a large geographical extent or area and may be close to the onshore elements of the Proposed Development.
Medium-high	Intermediate rating with combination of criteria from high or medium magnitude.
Medium	<ul style="list-style-type: none"> • Size / Scale – A medium scale change and moderate loss of some key landscape elements / characteristics or the addition of some new medium scale uncharacteristic features or elements that could partially affect the landscape character and the special landscape qualities / integrity of a landscape designation. Directly affecting a host landscape receptor or indirectly affecting a nearby receptor. • Geographical extent – The size or scale of landscape change would typically, but not always affect a more localised geographical extent at an intermediate distance from the onshore elements of the Proposed Development.
Medium-low	Intermediate rating with combination of criteria from medium or low magnitude.
Low	<ul style="list-style-type: none"> • Size / Scale – A small-scale change and minor loss of a few landscape elements / non key characteristics, or the addition of some new small-scale features or elements of limited characterising influence on landscape character / designations.

Magnitude of landscape change

Examples of landscape magnitude

- Geographical extent – There may be a small partial change in landscape character, typically, but not always affecting a localised geographical extent at some distance from the onshore elements of the Proposed Development.

Negligible - Zero

- Size / Scale – A very small-scale change that may include the loss or addition of some landscape elements of limited characterising influence. The landscape characteristics and character would be unaffected.
 - Geographical extent – Typically affecting a very small geographical extent at greater distance from the onshore elements of the Proposed Development.
-

Visual sensitivity rating

18.8.13 An overall level of sensitivity is applied for each visual receptor or view – High, Medium-high, Medium, Medium-low, or Low – by combining individual assessments of the value of the view and the susceptibility of the visual receptor to change. Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, is assessed in terms of their sensitivity. The basis for the assessments is made clear using evidence and professional judgement in the evaluation of each receptor. Criteria that tend towards higher or lower sensitivity are set out in **Table 18-28**.

Table 18-28 Visual sensitivity to change

Value / Susceptibility criteria	Level of value / susceptibility ranging from ‘High’ to ‘Medium’ to ‘Low’	
	High	Low
Value – is determined by consideration a range of indicators/criteria with examples as follows:		
Map/tourist information	Specific viewpoint identified in OS maps and/or tourist information and signage.	Viewpoint not identified in OS maps or tourist information and signage.
Facilities	Facilities provided at viewpoint to aid the enjoyment of the view.	No facilities provided at viewpoint to aid enjoyment of the view.
Planning recognition	View afforded protection in planning policy.	View is not afforded protection in planning policy.
Landscape value	View is within or overlooks a designated landscape, which implies a higher value to the visible landscape.	View is not within, nor does it overlook, a designated landscape.
Recognition	View has informal recognition and well-known at a local level, as having particular scenic qualities.	View has no informal recognition and is not known as having particular scenic qualities.
Art/Literature	View or viewpoint is recognised through references in art or literature.	View or viewpoint is not recognised in references in art or literature.
Scenic Quality	View has high scenic qualities relating to the content and composition of the visible landscape.	View has low scenic qualities relating to the content and composition of the visible landscape.
Susceptibility – is determined by consideration a range of indicators/criteria with examples as follows:		

Value / Susceptibility criteria	Level of value / susceptibility ranging from 'High' to 'Medium' to 'Low'	
	High	Low
Activity of the viewer	Viewer who is likely or liable to be influenced by the onshore elements of the Proposed Development such as residents, walkers, or tourists, whose main attention and interest may be on their surroundings.	Viewer who is un or less likely to be influenced by the onshore elements of the Proposed Development such as viewers whose attention is not focused on their surroundings (e.g. people at work, or team sports).
Nature of the View	Residents that gain static, long-term views of the development in their principal outlook.	Mobile viewers whose views are transient and dynamic (e.g. travelling in cars or on trains with glimpsed views).
Numbers of Viewers	Viewpoint is visited or used by a large number of people.	View is visited or gained by relatively very few people. An exception may be wild land.
Direction/ Field of View	A view that is focused in a specific directional vista, with notable features of interest in a particular part of the view.	Open views with no specific point of interest.
	Viewers are focused on the experience of a high level of visual amenity at the location due to its overall pleasantness as an attractive visual setting or backdrop to activities.	The visual amenity experienced at the location by viewers is less pleasant or attractive than might otherwise be the case.
<u>Sensitivity</u>	Sensitivity drawn from consideration of the above Value and Susceptibility criteria with the final conclusion on the level of Sensitivity ranging from 'High' to 'Medium' to 'Low'.	

Visual magnitude of change rating

- 18.8.14 The 'magnitude' or 'degree of change' resulting from the onshore elements of the Proposed Development is described as 'High', 'Medium-high', 'Medium', 'Medium-low', 'Low' and 'Negligible-Zero'. In assessing the magnitude of change, the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e., as short / medium / long-term and temporary / permanent). The basis for the assessment of magnitude for each receptor will be made clear using evidence and professional judgement and some examples of the levels of magnitude of change that can occur on views are defined in **Table 18-29**.

Table 18-29 Visual magnitude of change

Magnitude of visual change	Examples of visual magnitude
High	<ul style="list-style-type: none"> • Size and scale – A very large - large and dominant change to the view. • Number – Involving the loss / addition of a large number of features / elements. • Distance – Typically appearing closer to the viewer in the fore to middle ground. • Field of View (FoV) – Affecting a large vertical and wide horizontal FoV. • Nature of visibility – Multiple phase development, continuously and sequentially visible. • Contrast – Strong degree of contrast with surroundings with little or no screening. • Skyline – Visible on the skyline as a new feature. • Consistency of image – Contrasting with other developments, lacking in visual rationale. <p>Typically experienced from representative viewpoints illustrating a visual effect likely to be experienced by larger numbers of people, relative to the activity, affecting a large area or length / proportion of route. May also be experienced from a specific viewpoint.</p>
Medium-high	Intermediate rating with combination of criteria from high or medium magnitude of change category.
Medium	<ul style="list-style-type: none"> • Size and scale – A medium and prominent change to the view. • Number – Involving the loss/addition of a number of features / elements. • Distance – Typically appearing in the middle ground. • FoV – Affecting a medium vertical and a medium horizontal FoV. • Nature of visibility – Multiple phase development, intermittently and sequentially visible. • Contrast – Contrast with surroundings and may benefit from some screening. • Skyline – Visible on the skyline along with other features. • Consistency of image – Different from other developments, some visual rationale. <p>Typically experienced from representative viewpoints illustrating a visual effect likely to be experienced by a medium number of people, relative to the activity, affecting a medium area or length/proportion of route. May also be experienced from a specific viewpoint.</p>

Magnitude of visual change	Examples of visual magnitude
Medium-low	Intermediate rating with combination of criteria from medium or low magnitude of change category.
Low	<ul style="list-style-type: none"> • Size and scale – A small and noticeable change, could be missed by the casual observer. • Number – Involving the loss / addition of a small number of features/elements. • Distance – Typically appearing in the background. • FoV – Affecting a small vertical and a narrow horizontal FoV. • Nature of visibility – Simple, single development, intermittently and infrequently visible. • Contrast – Some parity / 'fits' with surroundings and may benefit from screening. • Skyline – Partly visible on a developed skyline or not visible on the skyline. • Consistency of image – Similar from other developments with visual rationale, appearing reasonably well accommodated within its surroundings. <p>Typically experienced from illustrative viewpoints likely to be experienced by low numbers of people, relative to the activity, affecting a smaller area or length/proportion of route. May also be experienced from a specific viewpoint.</p>
Negligible - Zero	<ul style="list-style-type: none"> • Size and scale – A small or negligible change, need to 'look for it'. • Number – Involving the loss / addition of a small number of features / elements. • Distance – Typically appearing in the far distance. • FoV – Affecting a small vertical and a very narrow horizontal FoV. • Nature of visibility – Simple, single development, intermittently and infrequently visible. • Contrast – Blends with surroundings and/or is well screened. • Skyline – Partly visible on a developed skyline or not visible on the skyline. • Consistency of image – Similar from other developments with strong visual rationale, appearing well accommodated within its surroundings. <p>Typically experienced from illustrative viewpoints likely to be experienced by low numbers of people, relative to the activity, affecting a smaller area or length/proportion of route. May also be experienced from a specific viewpoint.</p>

Determining the significance of effects

- 18.8.15 A matrix presented in **Table 18-30** is used as a guide to illustrate the LVIA process. In line with the emphasis placed in GLVIA3 (Landscape Institute and IEMA, 2013) upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone. Wherever possible cross references are made to baseline figures and/or visualisations to support the rationale. The matrix as presented in **Table 18-30** should therefore be considered as a guide and any deviation from this guide will be clearly explained in the assessment rationale.
- 18.8.16 Significant landscape and visual effects are highlighted in **bold** and shaded dark blue in **Table 18-30**, and relate to all those effects that result in a '**Major**' or a '**Major / Moderate**' level of effect. In some circumstances, '**Moderate**' levels of effect (shaded light blue) also have the potential, subject to the assessor's opinion, to be considered as significant and these exceptions are also highlighted in bold and are explained as part of the assessment, where they occur. White or unshaded boxes in **Table 18-30** indicate a non-significant effect.
- 18.8.17 Where there is no view of the onshore elements of the Proposed Development from a receptor, the magnitude of change is assessed as Zero, and the level of effect is stated as **no effect**.
- 18.8.18 The type of effect is also described and may be direct or indirect; short, medium or long-term; cumulative; and beneficial, neutral or adverse.

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Table 18-30 Evaluation of landscape and visual effects

Sensitivity	Magnitude of change					
	High	Medium-high	Medium	Medium-low	Low	Negligible-Zero
High	Major (Significant)	Major (Significant)	Major / Moderate (Significant)	Moderate*	Moderate*	Minor
Medium-high	Major (Significant)	Major / Moderate (Significant)	Moderate*	Moderate*	Moderate / Minor	Minor
Medium	Major / Moderate (Significant)	Moderate*	Moderate*	Moderate / Minor	Slight	Minor / Negligible
Medium-low	Moderate*	Moderate*	Moderate / Minor	Minor	Minor / Negligible	Negligible
Low	Moderate*	Moderate / Minor	Minor	Minor / Negligible	Negligible	Negligible

***Note: Moderate levels of effect may / may not be significant subject to the assessor's opinion which shall be clearly explained.**

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18.9 Assessment of effects: Oakendene substation

Introduction to landscape effects

- 18.9.1 Landscape effects are defined by the Landscape Institute and IEMA in GLVIA 3 (2013), paragraphs 5.1 and 5.2 as follows.
- "An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern ... is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. ... The area of landscape that should be covered in assessing landscape effects should include the site itself and the full extent of the wider landscape around it which the proposed Development may influence in a significant manner."*
- 18.9.2 These effects are assessed by considering the landscape sensitivity (value and susceptibility) against the magnitude of change. The type of effect may also be described as short, medium or long-term, direct or indirect, cumulative and beneficial, neutral, or adverse.
- 18.9.3 The residual landscape effects, assessed here, are those effects remaining after all of the embedded environmental measures have been taken into account outlined in **Section 18.7** and **Table 18-25**. An assessment of the cumulative landscape effects, taking account of other developments, as set out in **Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5) has been undertaken according to the methodology detailed in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1).
- 18.9.4 The landscape assessment for the onshore elements of the Proposed Development is set out as follows:
- Oakendene substation: construction phase:
 - ▶ Landscape effects on the 'host' landscape character area, taking account of the landscape characteristics and landscape elements that contribute to the landscape character;
 - ▶ Landscape effects on surrounding landscape character; and
 - ▶ Landscape effects on surrounding landscape designations.
- 18.9.5 An assessment of the cumulative landscape effects, taking account of other developments, as set out in **Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5) has been undertaken according to the methodology detailed in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1). The assessment of cumulative landscape effects on the onshore elements of the Proposed Development and whole Proposed Development effects have been assessed and reported for each receptor in this section with a summary provided in **Section 18.15**.

Summary of landscape effects

- 18.9.6 In summary, significant landscape effects resulting from the substation at Oakendene will be limited to the host J3: Cowfold and Shermanbury Farmlands LCA and some key characteristics and landscape elements (including hedgerow and treelines H512, H511 and scrub HS654). The geographical extent of affected landscape character (J3 LCA) includes the site of the substation and a further 100-250m of the surrounding area to the south and southwest in particular. These limited effects are due to the location of the substation site within a well-established network of mature trees and woodland and the perimeter planting involving native trees, woodland, hedging and understorey shrubs as illustrated in the [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) within the [DAS](#) (Document Reference: 5.8) and further explained in the [Outline LEMP](#) (Document Reference: 7.10).
- 18.9.7 There will be no other significant effects on landscape character and no effect on the High Weald AONB which are also included in the landscape assessment.

Landscape effects on the 'host' Landscape Character Area

- 18.9.8 The 'host' landscape (within which the onshore substation at Oakendene is located) is the J3: Cowfold and Shermanbury Farmlands LCA within Horsham District. At a county level this is part of the LW10: Eastern Low Weald County LCA within West Sussex and [Area 36: Adur Valley and Catchment HLC](#)), as illustrated in [Figure 18.5a, Volume 3](#) of the ES (Document Reference: 6.3.18).
- 18.9.9 This low-lying, gently undulating landscape comprises a lowland mixed pastoral and arable landscape with a strong hedgerow pattern and occupies the central and southern parts of the 2km LVIA Study Area. At a county level the LW10: Eastern Low Weald County LCA lies north of the Wealden greensand forming a horseshoe shape around the High Weald. Scattered woodlands, hedgerows and hedgerow trees create enclosure and restrict views in many parts of the surrounding area. Viewpoints SA1 to SA3 and SA7 to SA13 are located within this landscape ([Figures 18.10 to 18.14 and 18.75 to 18.77, Volume 3](#) of the ES (Document Reference: 6.3.18)). Viewpoints SA4 to SA6 have been excluded from further assessment due to a lack of visibility. The key characteristics as defined in the relevant landscape character assessments (West Sussex County Council 2003 and Horsham District Council, 2003) include:
- *“Gently undulating low ridges and valleys.*
 - *Scattered small woodlands.*
 - *Small and medium size pasture fields and some larger arable fields.*
 - *Mostly small scale intricate landscape. Localised areas with more open character.*
 - *Field ponds.*
 - *Small farmsteads and cottages dispersed along lanes and tracks.*
 - *The historic village of Cowfold and more suburban development at Partridge Green and Shermanbury.*

- *Local building materials of half timber, brick, tile, Horsham stone and weatherboarding.*
- *Landmark of St Hugh's Charterhouse Monastery at Shermanbury.*
- *Views dominated by the steep downland scarp to the south and the High Weald fringes to the north.*
- *Arable and pastoral rural landscape, a mosaic of small and larger fields, scattered woodlands, shaws and hedgerows with hedgerow trees.*
- *Quieter and more secluded, confined rural landscape to the west, much more development to the east, centred on Burgess Hill.*
- *Mix of farmsteads and hamlets favouring ridgeline locations, strung out along lanes.*
- *A modest spread of designed landscapes.*
- *Crossed by north-south roads with a rectilinear network of narrow rural lanes."*

18.9.10 The key landscape characteristics are defined in the West Sussex County Council (2013) Low Weald Local Distinctiveness Guidance include:

- *"The qualities of fine long views to and from ridges and scarp slopes.*
- *Small-scale, intimate and pastoral character of the landscape.*
- *The small irregular fields.*
- *Shaws enclosing fields and shaws linking into and integrating settlement.*
- *Species rich grassland.*
- *Ancient woodland.*
- *The strong network of hedgerows, shaws and hedgerow trees including chestnut and hazel coppice woodland.*
- *The rivers and streams with associated meadows and wet woodland.*
- *The natural character of watercourses*
- *Field trees (e.g. oak) linking copses and waterside trees.*
- *The network and character of narrow rural un-kerbed lanes, ancient droeways, and associated linear fields, green lanes, broad trackways, verges, and footpaths.*
- *Fruit growing on lighter soils.*
- *Mill sites and ponds, hammer ponds, ornamental lakes and ponds.*
- *Narrow field entrances and traditional gates."*

18.9.11 The most relevant landscape elements are the arable and pasture fields, field ponds, woodlands, ancient woodland, hedgerows, mature trees and watercourses within the LCA.

- 18.9.12 The HLC (WSCC et al., 2010) of this LCA largely overlaps with the Medieval period with some parts overlapped with Post Medieval to Modern, and Medieval to Post Medieval periods, as illustrated in [Figure 25.2.2h, Volume 3](#) of the ES (Document Reference: 6.3.18). The area of the onshore substation itself is largely identified as an 'Unknown' period.
- 18.9.13 At a local site level, the landscape within the proposed DCO Order Limits is fairly typical of the LCA descriptions and largely consists of pastureland divided by mature hedgerows, trees and woodland. The A272 is routed along the northern boundary and mature trees and hedges extend along the northern boundary and along the eastern boundary of Kent Street. To the south there is a lake and beyond this the land rises towards Taintfield Wood and mid-range views are afforded, beyond the trees towards Oakendene Manor house in the north (Viewpoint SA3, [Figure 18.12, Volume 3](#) of the ES (Document Reference 6.3.18)). The eastern boundary of the site abuts the Oakendene Industrial Estate which is tightly contained and enclosed by woodland and trees. Land to the west and northwest also comprises parkland landscape attached to Oakendene Manor. This also comprises pastureland divided by mature hedgerows with some parkland trees in the north, close to the house.

Landscape sensitivity of the 'host' landscape

Introduction

- 18.9.14 Landscape sensitivity has been assessed through a combination of the value of the landscape and its susceptibility, in accordance with GLVIA 3 and the methodology set out in [Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4](#) of the ES (Document Reference: 6.4.18.1).

Landscape value

- 18.9.15 The host landscape (J3: Cowfold and Shermanbury Farmlands) is not designated at a local or national level as illustrated in [Figure 18.6a, Volume 3](#) of the ES (Document Reference 6.3.18). Although the High Weald AONB is located approximately 550m to the north of the proposed DCO Order Limits along the A272, site survey has revealed that there will be limited intervisibility between the onshore substation and the AONB. The host landscape (J3: Cowfold and Shermanbury Farmlands) has limited recreational value, with local recreational walking and horse riding along PRoW and informal road cycling being the main forms of recreational activity. The local landscape has a sense of place and local distinctiveness, with a simple, rural character, network of fields with a strong landscape pattern of hedgerow field boundaries, scattered mature deciduous field boundary trees and woodlands, all of which contribute to the local landscape quality. There are also some intrusive or detracting features of suburbanisation with industrial estates, A roads, horse paddocks, pylons and existing substation infrastructure associated with the existing National Grid Bolney substation and Rampion 1 onshore substation to the southeast of the LVIA Study Area. Large-scale modern agricultural buildings also influence scenic quality, especially where there is inadequate screening. The landscape value of the onshore substation is therefore assessed as **Medium**, increasing to **Medium-high** closer to the AONB in the north of the LVIA Study Area.

Landscape susceptibility

- 18.9.16 The Horsham District Landscape Character Assessment (LCA) (Chris Blandford Associates on behalf of Horsham District Council, 2003) states that the “*Sensitivity to change overall is moderate reflecting the moderate to high intervisibility of the area and moderate intrinsic landscape qualities.*” The relatively rural character of this landscape is susceptible to the influence of the onshore Oakendene substation, which will be permanent and above ground in comparison to the onshore cable. Landscape susceptibility is however reduced by the mature vegetation which increases the landscape enclosure and restricts views from Taintfield Wood and the surrounding roads at Kent Street and along the A272. Susceptibility is also reduced where the landscape is influenced by the presence of pylons and other existing electrical infrastructure in the surrounding area. The dense network of trees and hedgerows are indicative of higher susceptibility as some of these will need to be removed to allow for the Proposed Development. The Oakendene Manor and historic parkland to the west of the DCO boundary are a further consideration, indicating higher susceptibility due to their historic nature, time depth and character. The landscape susceptibility of the onshore substation is therefore assessed as **Medium-high**, with an overall susceptibility of **Medium** across the whole LCA.

Overall sensitivity

- 18.9.17 The overall sensitivity to change considering all of the above factors and the assessment of Medium-high to Medium value and susceptibility, is considered to be **Medium-high**.
- 18.9.18 Landscape elements (mature trees, hedges and woodland) are also indicative of higher levels of sensitivity as they are not easily replaced.

Magnitude of change and significance of residual effects: during construction

- 18.9.19 This part of the assessment considered the effects of the onshore substation at Oakendene and the two temporary construction compounds at Oakendene and Oakendene West and associated construction accesses. The landscape effects of the onshore cable corridor in this area are assessed separately in [Appendix 18.3: Landscape assessment, Volume 4](#) of the ES [APP-169] and summarised later in this section under ‘Whole Proposed Development effects.’
- 18.9.20 There is potential for both direct changes to landscape elements and landscape character resulting from their alteration / loss; as well as the introduction of new features i.e. the construction of the substation at Oakendene and associated works, which will change the character of the landscape and pattern of elements within this localised area during the construction phase.
- 18.9.21 Pre-commencement of the onshore substation works and as part of the onshore site preparation works, tree and shrub planting will be undertaken to provide replacement dormouse habitat and connectivity. This will also have the advantage of strengthening existing landscape elements of hedgerows and treelines along the western boundary of the onshore substation which will be established in five years once the onshore substation is completed.

- 18.9.22 The construction works will include the creation of a new access from the A272 to be used during construction and operation of the Oakendene substation and to provide access to the Oakendene temporary construction compound to the immediate north of the onshore Oakendene substation site. Access A-63 will require hedge (H520b) to be permanently cleared / removed to 100m to allow for the permanent access to the substation with trees retained where possible. The remaining hedge / vegetation will be managed (hedge trimming and crown lifting) to allow for visibility splays which will be reduced to 120m as a result of a temporary 40mph speed limit. There will also be some vegetation removal at the northeastern corner of the site and the A272 / Kent Street junction to allow for a wider junction to facilitate construction access which will be reinstated post construction. Temporary passing places will also be required along Kent Street. The magnitude of change will be **Medium-high** reflecting the extent of permanent hedgerow / vegetation loss. Perimeter close-boarded fencing will be installed along the northern and eastern boundaries, behind existing vegetation which is to be retained and advance planting undertaken along the south, east and northern boundaries as shown in [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) within the [DAS \[REP3-013\]](#) and further explained in the [Outline LEMP \[REP4-047\]](#). Additional semi-mature parkland trees will also be planted as part of the advance planting described above, along the western boundary to provide further screening and enhance the parkland character in the fields to the east of Oakendene Manor.
- 18.9.23 Site clearance will require the permanent removal and loss of 547m hedgerows with trees (H511 and H512), associated scrub (HS 654) and approximately one field tree within the onshore substation footprint. The magnitude of change will be **High** reflecting the extent of permanent hedgerow and tree loss. All other trees, hedgerows and woodland along the perimeter of the proposed DCO order limit around the onshore substation will be retained ([Outline Vegetation Removal and Retention Plan](#) (Document Reference: 8.87)).
- 18.9.24 Whilst the advance planting and close-boarded fencing will screen out views of ground-based construction activity within the site area, a concrete batching plant up to 20m in height will be required and mobile cranes which will be visible above the close-boarded fence line. Within the site there will be construction access tracks, vehicle activity, machinery, cranes, welfare buildings / site offices, stockpiling of materials and construction related noise and lighting. Construction traffic will also be visible along the A272 and Kent Street. Ground works to form the substation platform and drainage / attenuation basins around the onshore Oakendene substation will occur followed by the installation of the substation and electrical infrastructure and security fencing.
- 18.9.25 As the onshore Oakendene substation is constructed, the form of the buildings (including the GIS Substation) and external electrical infrastructure (busbars) will take shape and consequently influence the existing landscape character. The built forms will increase the prominence of development components in the landscape through the introduction of large-scale buildings and complex electrical infrastructure although this would be screened to some extent by perimeter close-boarded fencing. Although providing screening of ground-based construction, visual unification and perceived protection of advance planting / vegetation, the close-boarded fencing will be a visible and 'sub-urbanising' feature in its own right. The scale and magnitude of these changes will be **High**.

- 18.9.26 The Oakendene West temporary construction compound will be accessed from the A272 via the existing access road to the Oakendene Industrial Estate (A-62). The low hedge (H612) will be cleared to 15m, and 2 oak trees will be retained by crown lifting and root protection measures. Vegetation will be managed (hedge trimming) to allow for visibility splays which will be reduced to 120m as a result of a temporary 40mph speed limit. The magnitude of change to these landscape elements will be **Medium-low**. As with the northern Oakendene temporary construction compound, perimeter close-boarded fencing / hoarding will be established behind the existing hedgerow along the northern / A272 perimeter to provide immediate screening of ground-based construction activity. A cement bound sand batching plant up to 20m in height will be required including other large machinery and mobile cranes which will be visible above the close-boarded fence line. Within the site there will be construction access tracks, vehicle activity, machinery, cranes, welfare buildings / site offices, stockpiling of materials and construction related noise and lighting. Construction traffic will also be visible along the A272. The scale and magnitude of these changes will be **High**.
- 18.9.27 Taken together, the construction of the onshore Oakendene substation and associated temporary construction compounds to the north and west will increase from Zero on commencement of the works towards a **High** magnitude of change to the local character of this landscape, affecting some of the key characteristics (including the “*pastoral rural landscape, a mosaic of small and larger fields, scattered woodlands, shaws and hedgerows with hedgerow trees*” and “*narrow rural un-kerbed lanes*”) and perceptual qualities (*Quieter and more secluded, confined rural landscape*). The permanent loss of landscape elements including a total of 662m of hedgerow / treelines and further trees and scrub as explained previously will also result in a **High** magnitude of change.
- 18.9.28 The retention of the majority of existing mature vegetation within the DCO boundary at the onshore substation and construction compounds, and the establishment of close-boarded screen fencing will act to contain some of the landscape effects within the site area. This will be supported by further successive layers of vegetation screening the construction works including the mature trees and hedgerows retained along Kent Street to the east, mature vegetation to the north and west around Oakendene Manor and along the A272, existing vegetation along the stream and lake to the south and woodland at Taintfield Wood in combination with rising ground also to the south which will all largely contain the geographical extent of significant landscape effects resulting from the Oakendene onshore substation and two temporary construction compounds. As a result, the geographical extent of the landscape effects will range up to approximately 300m distance from the proposed DCO order limit for the onshore Oakendene substation, and each of the two construction compounds. The greatest level of containment will be along the A272 and Kent Street in the north and east. Beyond this distance the landscape is generally well contained, restricting direct effects on the perception of landscape character beyond the DCO order limit to the extent that the magnitude of change will reduce to **Negligible to Zero**.
- 18.9.29 Taking account of the **Medium-high** sensitivity, and **Zero to High** magnitude of change, the residual effects on the ‘host’ LCA, key characteristics and landscape elements during the construction phase will increase from No effect to **Major (Significant)** upon completion. The geographical extent of these effects will range

up to approximately 300m distance from the DCO order limit, which includes the two construction compounds.

- 18.9.30 The duration of these effects will be short-term (four years) and the nature of these effects will be temporary, direct, and adverse, due largely to the nature of construction activity during this phase.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 1)

- 18.9.31 During operation at Year 1, the completed onshore Oakendene substation and its associated access will gain a more ‘settled’ appearance when compared to the same area during the construction phase, although significant landscape effects will continue at Year 1.
- 18.9.32 Native trees and hedgerows, woodland, shrubs and grassland will have been planted as illustrated in the **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) and further explained in the **Outline LEMP** (Document Reference: 7.10). The majority of hedgerow, woodland and understorey shrub planting around the outer perimeter of the site including that around the access and the junction of the A272/Kent Street will have been ‘advance planting’ with some planted ahead of the works on site and during the preceding four year construction phase prior to Year 1 and consequently approaching establishment. Other, more internal areas of planting and seeding will be undertaken prior to completion of construction as areas of the site are completed and not yet be established.
- 18.9.33 The Oakendene substation and associated access will appear as a new and detracting feature, adding to the existing electrical infrastructure further to the southwest at Bolney and significantly changing the local character of this landscape. This will affect some of the key characteristics (including the “*pastoral rural landscape, a mosaic of small and larger fields, scattered woodlands, shaws and hedgerows with hedgerow trees*”) although the landscape planting has been designed to mimic this character as it becomes established. The character of the “*narrow rural un-kerbed lanes*” at Kent Street and the and perceptual qualities (*Quieter and more secluded, confined rural landscape*) will be largely restored. The **Indicative Landscape Plan** within the **DAS [REP3-013]** will alter the arrangement of landscape elements (some lost / retained) and introduce new landscape elements, aligned to the key characteristics of the J3: Cowfold and Shermanbury Farmlands landscape character.
- 18.9.34 The geographical extent of these effects will be substantially reduced by the removal and reinstatement of the two construction compounds (Oakendene West and Oakendene substation construction compounds). As partly illustrated by the ZTV for the operational phase (**Figure 18.2a, Volume 3** of the ES (Document Reference: 6.3.18)) significant landscape effects will be largely contained to the proposed DCO Order Limits by vegetation along Kent Street and the A272 in the north and east, whilst existing vegetation at Oakendene Manor and Oakendene Industrial Estate will contain significant landscape effects to the west to within the proposed DCO Order Limits or <300m distance from the onshore substation. To the south significant landscape effects would be contained by Taintfield Wood and otherwise <300m from the proposed DCO Order Limits.

- 18.9.35 The magnitude of change within this more localised area (as a result of the advance planting and close-boarded screen fencing) will be **High**. The geographical extent of these effects will range up to approximately 300m distance from the proposed DCO Order Limits to the south and west, whilst being contained to within the proposed DCO Order Limits to the north and east.
- 18.9.36 Taking account of the **Medium-high** sensitivity, and **High** magnitude of change, the residual effects on the 'host' LCA during Year 1 will be **Major** although affecting a reduced geographical area (**Significant**).
- 18.9.37 The nature of these residual effects will be long-term (and reversible as the onshore substation will be decommissioned), direct and adverse.
- 18.9.38 Considering the 'host' landscape as a whole, the residual effects will be **Not Significant** in overall terms due to the presence of other existing infrastructure developments within 1km, most notably the National Grid Bolney substation and Rampion 1 onshore substation to the southeast, numerous pylons through the landscape, the busy A272 to the north and the adjacent Oakendene Industrial Estate to the west.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 5)

- 18.9.39 At Year 5, the native trees and hedgerows, woodland, shrubs and grassland as illustrated in the **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS [REP3-013]** including that around the access and at the junction of the A272/Kent Street will be established as illustrated. The planting will have achieved approximately 2-5m, dependent on species / other environmental factors and will strengthen the "*strong pattern of woodland, shaws and hedgerows*" in line with the existing character of the immediate landscape. As a result, the onshore substation will be largely screened from surrounding areas with the exception of higher ground to the south. The footprint of the onshore substation will however continue to directly affect the landscape character and introduce a new and detracting feature. The geographical extent of the effects arising from the presence of the substation will reduce slightly, ranging up to approximately 250m distance from the proposed DCO Order Limits to the south and west, whilst being contained to within the proposed DCO Order Limits to the north and east. Consequently, the magnitude of change affecting the landscape character, key characteristics and landscape elements will also reduce slightly to between **High** to **Medium-high**.
- 18.9.40 Taking account of the **Medium-high** sensitivity, and **High** to **Medium-high** magnitude of change, the residual effects on the 'host' LCA during Year 5 will range from **Major** to **Major / Moderate (Significant)**.
- 18.9.41 The nature of these residual effects will be long-term (and reversible as the onshore substation will be decommissioned), direct and adverse.
- 18.9.42 Considering the 'host' landscape as a whole, the residual effects will be **Not Significant** in overall terms due to the presence of other existing infrastructure developments within 1km, most notably the National Grid Bolney substation and Rampion 1 onshore substation to the southeast, numerous pylons through the

landscape, the busy A272 to the north and the adjacent Oakendene Industrial Estate to the west.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 10)

- 18.9.43 At Year 10, the native trees and hedgerows, woodland, shrubs and grassland as illustrated in the **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS [REP3-013]** will be well established with heights of approximately 4-8m, dependent on species / other environmental factors and will further strengthen the “*strong pattern of woodland, shaws and hedgerows*” in line with the existing character of the immediate landscape. The hedge around the access will have matured and the reinstated vegetation at the junction of the A272/Kent Street would have returned to its previous condition prior to construction. The onshore substation will be largely screened from surrounding areas with the exception of higher ground to the south. The footprint of the onshore substation will however continue to directly affect the landscape character and introduce a new and detracting feature. Given the further establishment and growth the magnitude of change arising from the presence of the substation will reduce to **Medium-high** within approximately 250m distance from the DCO order limit to the south and west, whilst being contained to within the DCO order limit to the north and east.
- 18.9.44 Taking account of the **Medium-high** sensitivity, and **Medium-high** magnitude of change, the residual effects on the ‘host’ LCA during Year 10 will reduce to **Major / Moderate (Significant)**.
- 18.9.45 The nature of these residual effects will be long-term (and reversible as the onshore substation will be decommissioned), direct and adverse.
- 18.9.46 Considering the ‘host’ landscape as a whole, the residual effects will be **Not Significant** in overall terms due to the presence of other existing infrastructure developments within 1km, most notably the National Grid Bolney substation and Rampion 1 onshore substation to the southeast, numerous pylons through the landscape, the busy A272 to the north and the adjacent Oakendene Industrial Estate to the west.

Magnitude of change: during decommissioning

- 18.9.47 The onshore Oakendene substation will be decommissioned at the end of the operation and maintenance phase. All visible, above ground structures of the onshore substation (buildings and busbars) will be removed upon decommissioning, thereby rendering the vast majority of the landscape effects as reversible. The area occupied by the onshore substation will be reinstated back to its original condition of fields with hedgerow boundaries. It is likely that the screen planting and landscaping, established at the beginning of the onshore Oakendene substation will be largely retained where practical.
- 18.9.48 The magnitude of change during the decommissioning phase will tend to decrease from **Major / Medium** at the operation and maintenance levels to non-significant levels of **Negligible-Zero** as the onshore Oakendene substation is dismantled and the pre-existing landscape reinstated. The assessment has assumed the

reinstatement to the previous land use and the removal of the onshore Oakendene substation. As with the construction phase, although short-term and temporary, these works are likely to involve greater movement of machinery and visibility of contrasting construction activity. It has been assumed that only one temporary construction compound (Oakendene substation) would be required.

- 18.9.49 Taking account of the **Medium-high** sensitivity, and **Medium to Zero** magnitude of change, the residual effects on the 'host' LCA during the decommissioning phase will range from **Major / Moderate to Moderate (Significant)** at the start of decommissioning reducing to **Minor (Not Significant)** upon completion.
- 18.9.50 The duration of these effects in the decommissioning phases will be short-term similar to the construction phase and the nature of these effects will be short-term, permanent, direct, and adverse, due largely to the nature of decommissioning activity across the onshore Oakendene substation during this phase and when compared to the pre-existing landscape of the local area. On completion the remaining native vegetation established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference: 5.8) will have a positive effect on landscape character.

Whole Proposed Development residual effects

- 18.9.51 The residual landscape effects of the whole Proposed Development (taking account of the onshore cable corridor and the substation at Oakendene) will be **Major (Significant)** during construction, affecting landscape character and elements <300m of the proposed DCO Order Limits. This level of effect will reduce during the operation and maintenance phase to Major / Moderate (Significant) by Year 10 as a result of onshore Oakendene substation and the native vegetation established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference: 5.8).
- 18.9.52 The landscape assessment of the onshore cable corridor is set out in detail in **Section 18.11** to **Section 18.13** and in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3).
- 18.9.53 The offshore elements of the Proposed Development will have **no effect** on this landscape.

Cumulative effects assessment

- 18.9.54 There are no other cumulative developments within close proximity to the onshore substation at Oakendene, the nearest being the cluster of energy related development (ID 50, 51, 52, 54, 56 and 57as set out in **Table 18-39**) which includes Solar farm and battery storage development to the north-east of the existing National Grid Bolney substation and south of Coombe Farm at 1.3km distance to the south-east. Due to a lack of intervisibility between these developments and the onshore substation at Oakendene, there will be no significant cumulative effects, overlapping with the LCA affected by the onshore substation at Oakendene. There will however be a combined cumulative effect on the LCA as a result of all of these schemes together, significantly characterising the LCAs in two locations, at Oakendene (**Major to Major / Moderate and Significant**) <300m) and at National Grid Bolney substation and Coombe Farm,

affecting the neighbouring LW1: Hickstead Low Weald LCA (**Major / Moderate and Significant**) as a result of the other cumulative developments, and not the onshore existing National Grid Bolney substation extension. The nature of these effects will be long-term, temporary to permanent, cumulative, direct, and adverse.

Indirect landscape effects on the surrounding Landscape Character

- 18.9.55 In addition to the host LCA (J3: Cowfold and Shermanbury Farmlands LCA), two other LCAs (M1 Crabtree & Nuthurst Ridges & Ghylls LCA and LW1 Hickstead Low Weald LCA) are assessed in detail in **Table 18-31**. These LCAs are illustrated in **Figure 18.5a, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.9.56 None of these landscapes will be directly affected by the onshore Oakendene substation as the onshore substation infrastructure will not be located within them, and there will be no change to their physical characteristics. Potential effects on these landscapes will be limited to indirect effects on perceptual characteristics of these landscapes, resulting from views of the onshore substation. The assessment considers the likely change to landscape character and as such it is different from the visual assessment of particular views, experienced by people.
- 18.9.57 In summary, apart from the ‘host’ LCA, none of the remaining LCAs within the LVIA study area will be significantly affected by the onshore Oakendene substation. An assessment of the effects of the onshore cable corridor is outlined in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Application Document Reference: 6.4.18.3).

Table 18-31 Oakendene Substation – indirect effects on surrounding Landscape Character (within 2km)

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

The M1: Crabtree & Nuthurst Ridges & Ghylls LCA is located to the north of Cowfold and the A272 approximately 400m distance north of the onshore substation at Oakendene. It is a well-wooded landscape that forms the southern flanks of the High Weald Forest Ridge that is dissected by gentle ‘gill’ streams draining to the south and east. Whilst it is possible to gain some long views over the Low Weald to the south, the area also has a strong network of woods and hedgerows that limit many views. Viewpoint SA6 is located within this landscape at a point where there are open views to the south, although the onshore substation at Oakendene will not be visible from this location. The key characteristics as defined in the relevant landscape character assessments (West Sussex County Council 2003 and Horsham District Council, 2003) state:

- *“Steep wooded ridges and ghylls.*
- *Strong pattern of woodlands, shaws and hedgerows.*
- *Ancient hedgerow oaks.*
- *Small to medium size irregular and regular-shaped pasture fields.*

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

- *Field ponds and small lakes.*
- *Numerous historic parks and gardens, e.g. Leonardslee, Sedgwick Park, Denne Park.*
- *Dispersed settlement pattern of farmsteads, and small hamlets, e.g. Nuthurst.*
- *Confined views.*
- *Traditional local building materials of sandstone, brick and tile hanging.”*

The most relevant landscape elements are the arable and pasture fields, woodlands, hedgerows and mature trees within the LCA.

The HLC (West Sussex HER, 2020) of this LCA largely overlaps with the Medieval period with some parts overlapped with Post Medieval to Modern, and World War 1 to World War II periods, as illustrated in [Figure 25.2.2h](#), in [Appendix 25.2: Onshore historic environment desk study, Volume 4](#) of the ES (Document Reference: 6.4.25.2).

Sensitivity to change:

The value of the northern part of the LCA is assessed as High reflecting its national value as part of the High Weald AONB. The southern part of the LCA is not within a designated landscape, indicating a lower Medium value. The southern part of this LCA is not rare, consisting of farmed pastoral and arable fields interspersed by tree belts, woodland and hedgerows which are not uncommon to the wider area. Although it has some scenic value indicating a degree of landscape quality, there is limited recreational value (local walking / horse riding along PRow and informal road cycling) in comparison to the High Weald AONB.

Indicators of lower susceptibility include the sense of enclosure and limited visibility due to the undulating landform, and the dense network of trees, hedges and woodland which prevent longer range views from within the LCA, close to the onshore substation. The changing character of the land use and the landcover pattern of the arable fields, in the south of the LCA is a further indicator of lower susceptibility due to regular crop rotation and the movement of agricultural machinery. The elevated landscape to the north within the LVIA Study Area has limited open views to the south due to the dense network of trees, hedges and woodland. The susceptibility of the landscape overall is assessed as Medium. The overall sensitivity is therefore assessed as **High** in the north of the LCA (within the AONB) to **Medium** in the south.

Effects during construction

Magnitude of change and significance of residual effects:

There is limited ZTV coverage within this LCA and much of the area is subject to further screening from intervening mature vegetation. There will, however, be filtered views of construction works associated with the onshore Oakendene substation along very limited areas within the southern fringes of the LCA, particularly in relation to the Oakendene and Oakendene West temporary construction compounds as they are

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

located closest to the LCA at approximately 140m distance. The top of concrete / cement bound sand batching plants and mobile cranes are likely to be visible although the ground-based construction will be largely screened by intervening vegetation. Where visible, any loss of landscape elements will be minimal (**Negligible-Zero**). This is demonstrated by the lack of visibility of traffic moving along the A272 and Oakendene Industrial Estate to the south. The upper parts of pylons crossing the landscape to the south of Oakendene Industrial Estate and Taintfield Wood also demonstrate the likely limited visibility of the substation at Oakendene. It is therefore not considered that the construction works will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will range from Zero at the start of the construction works to **Medium - Low** along the southern fringes of the LCA. From the north of the LCA, the magnitude of change will be Negligible – Zero.

Therefore, the effect on landscape character during the construction phase will range from **No effect** at the start of construction increasing to **Moderate / Minor (Not Significant)** along the southern fringes of the LCA. The maximum effect on the northern part of the LCA will be **Minor (Not Significant)** to **No effect**. The nature of these effects will be short-term, temporary, indirect and adverse to neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

ZTV analysis indicates theoretical visibility of the onshore Oakendene substation (busbars and taller buildings) from very limited areas along the southern fringes of the LCA at approximately 500m distance as the landform rises towards Upper Barn. Beyond this to the north and west, visibility becomes patchy and potential views are more likely to be restricted by surrounding existing tree and hedgerow cover. Native vegetation planted as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference: 5.8) will have been undertaken. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will range from Low along the southern fringes of the LCA to Negligible - Zero on the remainder of the LCA. Therefore, the effect on landscape character during Year 1 will be **Minor (Not Significant)** along the southern fringes of the LCA. The maximum effect on the northern part of the LCA will be **Minor (Not Significant)** to **No effect**.

Magnitude of change and significant of residual effects: Year 5

Native vegetation established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference: 5.8) will be established at between approximately 2-5m height, dependent on species / other environmental factors. There will be limited visibility of the onshore Oakendene substation along the southern fringes of the LCA. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will range from Low along the southern fringes of the LCA to **Negligible - Zero** on the remainder of the LCA. Therefore, the effect on landscape character during Year 5 will be Minor (Not

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

Significant) along the southern fringes of the LCA. The maximum effect on the northern part of the LCA will be **Minor (Not Significant)** to **No effect**. The nature of these effects will be long-term, temporary, indirect and beneficial / neutral.

Magnitude of change and significant of residual effects: Year 10

Native vegetation established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the **DAS** (Document Reference: 5.8) will be well established at between approximately 4-8m height, dependent on species / other environmental factors. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be **Negligible – Zero** on the whole LCA. Therefore, the effect on landscape character during Year 10 will be **Minor / Negligible (Not Significant)**. The nature of these effects will be long-term, temporary, indirect and neutral.

Effects during decommissioning

Magnitude of change and significant of residual effects:

Decommissioning works associated with the onshore Oakendene substation will generally be the reverse of the construction works as the landscape is restored, **however native** vegetation established as part of the [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the **DAS** (Document Reference: 5.8) will be very well established along with existing vegetation with very limited to almost no visibility of the decommissioning works from much of the LCA. It is not considered that the decommissioning works will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be **Negligible – Zero** on the whole LCA. Therefore, the effect on landscape character will be **Minor / Negligible (Not Significant)**. The nature of these effects will be short-term, permanent, indirect and beneficial / neutral when compared to the pre-existing landscape of the local area.

Whole Proposed Development residual effects:

There will be no residual effects from the onshore cable corridor and the offshore elements of the Proposed Development will have no effect on this landscape. Therefore, the whole Proposed Development effects will be limited to the onshore Oakendene substation as assessed above.

Cumulative effects assessment:

There are no cumulative developments within this LCA with the nearest development being the cluster of energy related development (ID 50, 51, 52, 54, 56 and 57 as set out in **Table 18-39**) which includes Solar farm and battery storage development to the north-east of the existing National Grid Bolney substation and south of Coombe Farm at 1.8km distance to the south-east. Due to a lack of intervisibility between these developments and the onshore substation at Oakendene, there will be no significant cumulative effects.

LW1 Hickstead Low Weald LCA

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

(also part of LW10: Eastern Low Weald LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

The LW1: Hickstead Low Weald LCA is located to the east of the substation at Oakendene within Mid Sussex. At its closest point it is located 350m east of Kent Street and Southlands Farm, whilst the majority of this LCA is located beyond Wineham Lane 1km to the east of the proposed DCO order limits.

This landscape comprises a lowland mixed pastoral and arable landscape with a strong hedgerow pattern that overlays a topography of low ridges and clay vales drained by the upper Adur streams. Where available, views are often focused on the steep chalk escarpment in the SDNP to the south and the High Weald fringes to the north in the AONB. Omitted viewpoint SA8 is located within this landscape, and confirms no visibility of the onshore substation at Oakendene from this location. The key characteristics as defined in the relevant landscape character assessments (West Sussex County Council 2003 and Mid-Sussex District Council, 2005) state:

- *“Alternating west-east trending low ridges with sandstone beds and clay vales carrying long, sinuous upper Adur streams.*
- *Views dominated by the steep downland scarp to the south and the High Weald fringes to the north.*
- *Arable and pastoral rural landscape, a mosaic of small and larger fields, scattered woodlands, shaws and hedgerows with hedgerow trees.*
- *Quieter and more secluded, confined rural landscape to the west, much more development to the east, centred on Burgess Hill.*
- *Biodiversity in woodland, meadowland, ponds and wetland.*
- *Mix of farmsteads and hamlets favouring ridgeline locations, strung out along lanes.*
- *A modest spread of designed landscapes and major landmark of Hurstpierpoint College.*
- *Crossed by north-south roads including the A23 Trunk Road, with a rectilinear network of narrow rural lanes.*
- *London to Brighton Railway Line crosses the area through Burgess Hill.*
- *Varied traditional rural buildings built with diverse materials including timber framing, weatherboarding, Horsham Stone roofing and varieties of local brick and tile-hanging.*
- *Principal visitor attraction is the Hickstead All England Equestrian Showground.”*

The most relevant landscape elements are the arable and pasture fields, scattered woodlands, hedgerows and hedgerow trees within the LCA.

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

The HLC (West Sussex HER 2020) of this LCA largely overlaps with the Medieval period with some parts overlapped with Post Medieval to Modern, and World War 1 to World War II periods, with the area to the south-east overlapped with the Early Medieval / Dark Age and Medieval to Post Medieval periods, as illustrated in [Figure 25.2.2h](#) in [Appendix 25.2 Onshore historic environment desk study](#) of the ES (Document Reference: 6.4.25.2).

Sensitivity to change:

There are no national or local landscape designations within this landscape. The landscape is not rare, consisting of farmed pastoral and arable fields interspersed by tree belts, woodland and hedgerows which are not uncommon to the wider area. However, the rolling landscape does have some scenic value and the proximity of this landscape to the High Weald AONB to the north indicates a degree of landscape quality. Opportunities to experience the landscape result from its network of recreational routes / PRoW, historic villages, rural roads and the equestrian showground at Hickstead. This landscape within the LVIA Study Area has limited recreational value, with local recreational walking and horse riding along PRoW and informal road cycling being the main forms of recreational activity. The value of the LCA is therefore assessed as Medium. The Landscape Character Assessment for Mid Sussex (LCA) 2005 states that the “*Parts of the area are visually exposed to views from the downs with a consequently high sensitivity to the impact of new development and the cumulative visual impact of buildings and other structures.*” Indicators of lower susceptibility include the sense of enclosure and limited visibility due to the rolling landform, and the network of trees, hedges and woodland which prevent longer views from within the LCA, close to the onshore substation at Oakendene. The changing character of the landuse and the landcover pattern of the arable fields is a further indicator of lower susceptibility due to regular crop rotation and the movement of agricultural machinery. The existing National Grid Bolney substation in this LCA is well screened but a local influence on the landscape sensitivity of the onshore substation. The susceptibility of the landscape overall is assessed as Medium. The overall sensitivity is therefore assessed as **Medium**.

Effects during construction

Magnitude of change and significance of residual effects:

There is limited ZTV coverage within this LCA (western edge) and much of the area is subject to further screening from intervening vegetation. In reality, visibility of the construction works is unlikely given the successive layering effect of intervening vegetation, even in the winter. It is not considered that the construction works will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change during the construction period will be **Negligible - Zero**.

The effects on landscape character, during construction will range from **None** to **Minor / Negligible (Not Significant)** as a result of the construction works associated with the onshore Oakendene substation. The nature of these effects will be short-term, temporary, indirect and neutral.

Effects during operation and maintenance

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

Magnitude of change and significance of residual effects: Year 1

Native vegetation established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS](#) (Document Reference: 5.8) will be planted (but not established at Year 1) around the onshore Oakendene substation which will further add to the layering effect of intervening vegetation. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be **Negligible - Zero**. The effects on landscape character, during Year 1 will be **Minor / Negligible (Not Significant)** as a result of the onshore substation. The nature of these effects will be short-term, temporary, indirect and neutral.

Magnitude of change and significance of residual effects: Year 5

Native vegetation established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS](#) (Document Reference: 5.8) will be established between approximately 2-5m, dependent on species which will further add to the layering effect of intervening vegetation. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be **Negligible - Zero**. The effects on landscape character, during Year 5 will be **Minor / Negligible (Not Significant)** as a result of the onshore substation. The nature of these effects will be short-term, temporary, indirect and neutral.

Magnitude of change and significance of residual effects: Year 10

Native vegetation established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS](#) (Document Reference 5.8) will be well established between approximately 4-8m, dependent on species which will further add to the successive layering effect of intervening vegetation. It is not considered that the onshore Oakendene substation will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be Negligible - Zero. The effects on landscape character, during Year 10 will be **Minor / Negligible (Not Significant)** as a result of the onshore substation. The nature of these effects will be short-term, temporary, indirect and beneficial / neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore Oakendene substation will generally be the reverse of the construction works as the landscape is restored. Native vegetation established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS](#) (Document Reference 5.8) will be very well established along with existing vegetation with no visibility of the decommissioning works from much of the LCA. It is not considered that the decommissioning works will significantly alter the key perceptual characteristics of the LCA and its key characteristics will be retained. The magnitude of change will be **Negligible – Zero**. The effects on landscape character, during decommissioning will be **Minor / Negligible (Not Significant)** and the nature of these effects will be long-term,

M1 Crabtree & Nuthurst Ridges & Ghylls LCA (also part of HW4: High Weald Fringes LCA within West Sussex and Area 34: Adur Valley and Catchment HLC)

permanent, indirect and beneficial / neutral when compared to the pre-existing landscape of the local area.

Whole Proposed Development residual effects:

There will be **Major / Moderate (Significant)** effects on this landscape (<250m) during construction of the onshore cable corridor. These significant effects will not persist through the operation and maintenance period and as assessed above, there will be no significant effects as a result of the onshore substation at Oakendene. Equally there will be no significant effects on landscape character resulting from the existing National Grid Bolney substation extension (GIS or AIS).

The offshore elements of the Proposed Development will have no effect on this landscape.

Cumulative effects assessment:

The onshore elements of the Proposed Development will be experienced cumulatively with the cluster of energy related development (ID 50, 51, 52, 54, 56 and 57 as set out in **Table 18-39**) which includes Solar farm and battery storage development to the north-east of the existing National Grid Bolney substation and south of Coombe Farm at 1.8km distance to the south-east (both High magnitude). The combined effect will be **Major / Moderate (Significant)** due to this cluster of energy related development and not the onshore Oakendene substation at either Oakendene or the **existing National Grid Bolney substation extension**. The additional effect will remain **Minor / Negligible (Not Significant)**. The nature of these effects will be short to long-term, temporary to permanent, cumulative, direct to indirect, and adverse to neutral.

Indirect landscape effects on Landscape Designations

High Weald AONB

- 18.9.58 The PEIR (RED, 2021) LVIA reported no significant effects on landscape character which is overlapped by the High Weald AONB or along its boundary and no significant visual effects in respect of views to or from the High Weald AONB that could affect its setting (reference Viewpoints SA6: PRow 1750 north of Aglands and Viewpoint M: High Weald Landscape Trail, near Bolney). The PEIR LVIA (RED, 2021) concluded that there would be **no effect** on the special qualities, setting and integrity of the High Weald AONB. The High Weald AONB Partnership agreed with this assessment.
- 18.9.59 The further assessment provided here takes account of the greater design maturity and embedded environmental measures, including the native vegetation that will be established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference: 5.8). The High Weald AONB will not be directly affected by the onshore substation at Oakendene, however it may be indirectly affected in terms of its special qualities, setting and integrity.

18.9.60 The High Weald AONB is described on their website (High Weald AONB, 2021) as:

“A medieval landscape of wooded, rolling hills, studded with sandstone outcrops; small, irregular-shaped fields; scattered farmsteads; and ancient routeways. The 1,461km² area covers parts of Kent, Sussex and Surrey at the heart of South East England.”

18.9.61 Key attractions within the High Weald AONB include over 30 small manor houses, castles and parks and gardens (nine managed by the National Trust); and other visitor attractions such as Bewl Water; Harrison's Rocks; Bedgebury Forest and three steam railways.

18.9.62 The Statement of Significance 2019-24 defines what makes the High Weald special and identifies the qualities that justify its designation as a nationally important landscape (High Weald AONB, 2019, p23). Five special landscape qualities (SLQ) are identified as follows:

“1. Geology, landform and water systems – a deeply incised, ridged and faulted landform of clays and sandstone with numerous gill streams.

2. Settlement – dispersed historic settlement including high densities of isolated farmsteads and late Medieval villages founded on trade and non-agricultural rural industries.

3. Routeways – a dense network of historic routeways (now roads, tracks and paths).

4. Woodland – abundance of ancient woodland, highly interconnected and in smallholdings.

5. Field and Heath – small, irregular and productive fields, bounded by hedgerows and woods, and typically used for livestock grazing; with distinctive zones of lowland heaths, and incised river valleys.

Land-based economy and related rural life bound up with, and underpinning, the observable character of the landscape with roots extending deep into history. An increasingly broad-based economy but with a significant land-based sector and related community life focused on mixed farming (particularly family farms and smallholdings), woodland management and rural crafts.

Other qualities and features that are connected to the interaction between the landscape and people and which enrich character components. Such qualities and features enhance health and wellbeing, and foster enjoyment and appreciation of the beauty of nature. These include locally distinctive features which enrich the character components such as historic parks and gardens, orchards, hop gardens, veteran trees, along with their rich and varied biodiversity, and a wide range of appealing and locally distinctive historic buildings including oast houses, farm buildings, Wealden Hall houses and their associated features such as clay-tile cat-slide roofs. People value the wonderful views and scenic beauty of the High Weald with its relative tranquillity. They appreciate the area's ancientness and sense of history, its intrinsically dark landscape with the opportunity to see our own galaxy – the Milky Way – and the ability to get close to nature through the myriad public rights of way.”

- 18.9.63 Perceptions of scenic beauty and tranquillity are noted as relevant SLQ. Additionally, the wooded character and incised nature of some of the valleys indicates higher levels of enclosure and limited views out from the AONB towards the onshore substation. This has proved to be the case as a result of site surveys. The setting of the High Weald AONB is not defined but is likely to include areas close to the boundary with common landscape character and qualities and views out from the AONB beyond the boundary as well as views towards the AONB and any particular landmarks from the surrounding landscape.
- 18.9.64 No significant effects on landscape character have been identified within the High Weald AONB or along its boundary.
- 18.9.65 No significant visual effects have been identified in respect of views of visual receptors within the High Weald AONB and there are no significant effects on views that view north towards landmarks within the High Weald AONB that could affect its setting. The following viewpoints are located within the High Weald AONB:
- Viewpoint SA6: PRoW 1750 north of Aglands; and
 - Viewpoint M: High Weald Landscape Trail (near Bolney).
- 18.9.66 Neither of these will view the onshore substation due to the intervening distance and vegetation screening and both viewpoints have therefore been omitted from the LVIA.
- 18.9.67 Consequently, there will be **no effect** on the special qualities, setting and integrity of the High Weald AONB.

Introduction to visual effects

- 18.9.68 Visual effects are assessed by considering the sensitivity of the receptor (people in the landscape) and the magnitude of change that will affect the view or overall visual amenity. They are defined by the Landscape Institute and IEMA (2013) in GLVIA 3, paragraphs 6.2 as follows:
- "An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. The concern here is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements."*
- 18.9.69 The type of effect may also be described as temporary or permanent, short-term to long-term, direct or indirect, and beneficial, neutral, or adverse. The assessment methodology is set out in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1).
- 18.9.70 The residual visual effects assessed here are those effects remaining after all of the embedded environmental measures have been taken into account outlined in **Section 18.7** and **Table 18-25**.
- 18.9.71 The visual effects have been assessed during construction, operation and maintenance (Years 1, 5 and 10), and decommissioning phases.

- 18.9.72 The visual assessment is set out as follows:
- visual effects on views from settlements;
 - visual effects on views from transport routes;
 - visual effects on views from recreational routes; and
 - visual effects on views from recreational and tourist destinations.
- 18.9.73 Visualisations of the Oakendene substation, including eight photomontages are provided from ten viewpoint locations SA1 to SA3 and SA7 to SA13 (**Figures 18.10 to 18.14 and 18.75 to 18.77, Volume 3** of the ES (Document Reference: 6.3.18)). Viewpoints SA4 to SA6 have been excluded from further assessment due to a lack of visibility. Each of the viewpoints are assessed in a separate appendix (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)).

Summary of viewpoint analysis

- 18.9.74 The viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) indicates that significant visual effects are likely to affect limited locations up to approximately 300m distance from Oakendene Substation, during the construction phase as indicated by all of the viewpoints except SA8: PRoW 1789 north of Eastridge Farm.
- 18.9.75 During the operation and maintenance phase visibility will be limited to the north and east by vegetation along the A272 and Kent Street close to the proposed DCO order limits. Visibility will extent further to the west towards Oakendene Manor and Industrial Estate and furthest in the south from high ground near Taintfield Wood. At Year 1 of viewpoints SA2: A272 Site entrance and SA7: PRoW 1788 south-west of Site, west of Taintfield Wood will no longer experience significant effects due to the cessation of construction works and the reinstatement of the temporary construction compounds at Oakendene to the north and Oakendene West. At Year 5 significant effects will reduce further as illustrated by viewpoints SA1: Kent Street, SA3: PRoW 1786, Taintfield Wood and SA12: PRoW 1787 south of Site at gap in hedge. By Year 10, significant effects will be limited to viewpoint SA3 and SA12, both to the south, on high ground north and east of Taintfield Wood. No viewpoints will be significantly affected during the decommissioning phase as all existing vegetation, and new vegetation planted during the construction phase will be well established and screening the majority of the onshore Oakendene substation.
- 18.9.76 With regards to Whole Proposed Development effects, none of the viewpoints will be affected by the offshore elements of the Proposed Development. Viewpoints SA1, SA3 and SA12 will be significantly affected by both the Oakendene Substation and the onshore cable corridor during the construction phase. Viewpoint SA8 will experience significant effects during the construction phase as a result of the onshore cable corridor but with no effects arising from the substation and with no significant effects beyond that.
- 18.9.77 None of the viewpoints will be cumulatively affected.

Summary of visual effects

- 18.9.78 In summary, significant visual effects will be limited to views from sections of two roads, including the A272 and Kent Street and from sections of three footpaths PRow (1786, 1787 and 1788).
- 18.9.79 There will be no significant effects on views from settlements, including the nearest settlement at Cowfold, or from tourist facilities such as Wineham Lane Caravan Park.
- 18.9.80 Views from the nearest residential properties have been assessed in terms of their residential visual amenity and reported in **Appendix 18.5: Residential Visual Amenity Assessment, Volume 4** of the ES [APP-171]. Although the assessment found no instances where the Residential Visual Amenity Threshold had been reached the views from four properties would be significantly affected during the construction phase including Oakendene Manor, Coopers Cottage, The White House and a property at Oakendene Industrial Estate. Significant visual effects would also extend into Year 1 of the operational and maintenance phase affecting the views from Oakendene Manor.

Visual effects on views from settlements

- 18.9.81 The visual effects likely to be experienced from settlements include consideration of residential areas, the public realm and public open spaces within the settlement boundaries that will be frequented by people.
- 18.9.82 The sensitivity of each of these receptors (people) at settlements has been assessed as **High** due to the high susceptibility of residents in accordance with GLVIA 3, paragraph 6.33 (Landscape Institute and IEMA, 2013). The value of the view is also likely to be regarded as high by the residents themselves.
- 18.9.83 In summary, one settlement (Cowfold) is included in the assessment and there will be no significant effects on the views from Cowfold as assessed in **Table 18-32**.

Table 18-32 Oakendene substation – Visual effects on views from Settlements

Settlements: Cowfold

The settlement of Cowfold is located approximately 1.1km west of Oakendene substation. It is largely contained and surrounded by woodland blocks or groups of trees in all directions. The majority of the settlement is outwith the ZTV with very limited visibility on the eastern edge of the village, however, these views will be further restricted by intervening vegetation.

Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with the onshore Oakendene substation will not be visible from any part of Cowfold village including southeast at Eastlands Farm due to screening from intervening landform and the layering effect of intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**.

There will be **no effect** on the ground or street level views from the settlement.

Settlements: Cowfold

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The onshore substation will not be visible from any part of Cowfold village due to screening from intervening landform and the layering effect of intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**. There will be **no effect** on the ground or street level views from the settlement.

Magnitude of change and significance of residual effects: Year 5

As assessed in Year 1, the onshore substation will not be visible from the settlement and the magnitude of change will therefore be **Zero**. There will be **no effect** on the ground or street level views from the settlement.

Magnitude of change and significance of residual effects: Year 10

As assessed in Year 1, the onshore substation will not be visible from the settlement and the magnitude of change will therefore be **Zero**. There will be **no effect** on the ground or street level views from the settlement.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore substation will not be visible from any part of Cowfold village due to screening from intervening landform and the layering effect of intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**, assuming the maintenance of the existing baseline.

There will be **no effect** on the ground or street level views from the settlement.

Whole Proposed Development residual effects:

The onshore cable corridor will not be visible from this settlement.

The offshore elements of the Proposed Development will not be visible from this settlement. Therefore, there will be no whole Proposed Development residual visual effects.

Cumulative effects assessment:

None of the cumulative developments will be visible from this settlement. Therefore, there will be no cumulative visual effects.

Visual effects on views from transport routes

18.9.84 This section of the assessment considers the visual effects on views of the onshore Oakendene substation from transport routes included in the assessment as outlined in **Table 18-21**. The transport routes are illustrated on **Figure 18.7a**iii of the ES (Document Reference 6.3.18) and those assessed include:

- A272;
- A281; and
- Kent Street.

18.9.85 The views from these transport routes will be experienced transiently by road users (mainly drivers and where appropriate cyclists and walkers) who will experience the onshore substation as part of the changing sequence of views

experienced from the road. Each of these transport routes were driven or travelled in both directions in order to assess the potential effects and each assessment has been assisted on-site with the use of sequential wirelines and ZTV maps (**Figure 18.7aiii, Volume 3** of the ES (Document Reference: 6.3.18)).

- 18.9.86 In summary, significant visual effects will be limited to short, intermittent sections of transport routes affecting up to 300m of the A272 as it passes the northern boundary of the onshore substation, and up to 1km of Kent Street as it passes the eastern boundary of the onshore Oakendene substation, subject to the screening effects of vegetation, during the winter months. Effects on the remaining transport routes would be not significant.

Table 18-33 Oakendene substation – Visual effects on views from Transport routes

Transport Routes: A272

The A272 connects Cowfold in the west and Crosspost in the east within the LVIA Study Area. It passes along the northern boundary of the onshore Oakendene substation. Viewpoint SA2 (**Figure 18.11a-e, Volume 3** of the ES (Document Reference: 6.3.18)) is located along on this transport route at the junction with Kent Street and Viewpoint SA9 (**Figures 18.14.1a-e, Volume 3** of the ES (Document Reference: 6.3.18)) is located at Site access to be created off the A272.

Sensitivity to change

The A272 is not a designated tourist transport route and does not pass through an area designated for its scenic value. The value of the A272 is therefore assessed as Medium. Most of the road users will experience the landscape transiently whilst driving or cycling (there is no footpath provision) and experiencing a sequence of views, often in one direction focused on the direction of travel and often experienced at speed indicating a Medium susceptibility. To conclude, the sensitivity of road users on the A272 has been assessed as **Medium**.

Effects during construction

Magnitude of change and significance of residual effects:

The onshore construction works will include the creation of a new Site access off the A272 to be used during construction and operation of the Oakendene substation and to provide access to the Oakendene temporary construction compound to the immediate north of the onshore Oakendene substation site. Access A-63 will require hedge (H520b) to be permanently cleared / removed to 100m to allow for the permanent access to the substation with trees retained where possible. The remaining hedge / vegetation will be managed (hedge trimming and crown lifting) to allow for visibility splays which will be reduced to 120m as a result of a temporary 40mph speed limit. There will also be some vegetation removal at the northeastern corner of the site and the A272 / Kent Street junction to allow for an increased junction to facilitate construction access which will be reinstated post construction. Perimeter close-boarded fencing will be installed along the northern and eastern boundaries, behind existing vegetation which is to be retained and advance planting undertaken as shown in **Appendix D Oakendene onshore substation Indicative Landscape Plan** within the **DAS [REP3-013]** and further explained in the **Outline LEMP [REP4-047]**.

Transport Routes: A272

Road users will see changes to the road corridor whilst passing the Site and will be able to glimpse the temporary construction compound and associated works through the access gate. This is likely to include local task lighting.

Whilst the advance planting and close-boarded fencing will screen out views of ground-based construction activity within the site area, a concrete batching plant up to 20m in height will be required including other large machinery and mobile cranes which will be visible from the road above the close-boarded fence line, subject to intervening tree screening.

The close-boarded fencing will be a visible as a 'sub-urbanising' feature in its own right. The scale and magnitude of these changes will be **High** affecting approximately 200m of the route.

The Oakendene West temporary construction compound will be accessed from the A272 via the existing access road to the Oakendene Industrial Estate (A-62). The low hedge (H612) will be removed / cleared to 15m, and 2 oak trees will be retained by crown lifting and root protection measures. Vegetation will be managed (hedge trimming) to allow for visibility splays which will be reduced to 120m as a result of a temporary 40mph speed limit. As with the northern Oakendene temporary construction compound, perimeter close-boarded screen fencing / hoarding will be established behind the existing hedgerow along the northern / A272 perimeter to provide immediate screening of ground-based construction activity. A cement bound sand batching plant up to 20m in height will be required including other large machinery and mobile cranes which will be visible above the close-boarded fence line. Construction traffic will also be visible along the A272. The scale and magnitude of these changes will be High affecting approximately 200m of the route.

Taken together the magnitude of change will be **High** (all seasons) affecting up to 300m of the route, predominantly due to the extent of visibility of the Oakendene substation temporary construction compounds, reducing to **Negligible – Zero** for the remainder of the route. The effects on the A272 will range from **Major / Moderate (Significant)** affecting up to 300m of the A272, reducing to **Minor / Negligible (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and adverse to neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The southern boundary of the road will be defined by the creation of the new access consisting of a close boarded fence painted green and security gate behind the new bell mouth. New hedge planting will be apparent in front of the close-boarded fence that would have been planted during construction but will not yet have matured. Glimpses of the substation may be available through the gate but would be screened by the close-boarded fence either side. These alterations will affect the views from approximately 200m of the road. Evidence of the removal of vegetation at the junction of the A272 with Kent Street along with the new reinstatement planting may also be apparent from the road, although the enlarged junction will have been reinstated. Equally the Oakendene West temporary construction compound will also have been reinstated.

From the remainder of the A272, there will be almost no visibility of the onshore Oakendene substation due to the layering effect of intervening vegetation, even in the winter. The surrounding field boundary vegetation including new planting will provide

Transport Routes: A272

further mitigation in the form of visual containment. The magnitude of change will be **Medium-high** (all seasons), reducing –to **Negligible – Zero** for the remainder of the route.

The effects on the A272 will range from **Moderate (Significant)** (up to 200m of the A272) to **Minor / Negligible (Not Significant)**. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 5

The native vegetation, established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be established and between approximately 1.5-3m height, dependent on species / environmental conditions. By year 5 the hedge in front of the close-boarded fence will have established and the close boarded fence will be removed to reveal a view of the newly established landscape planting and the immediate site entrance and gate visible. Where the existing hedge along the A272 is retained, it will be managed to grow taller and further screening will be provided by existing trees (W792) which will be retained. The magnitude of change on the view will reduce to **Medium-low** (all seasons) affecting up to 200m of the A272, to **Negligible – Zero** for the remainder of the route. The effects on the A272 will range from **Moderate / Minor (Not Significant)** affecting up to 200m of the A272 to **Minor / Negligible (Not Significant)**. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 10

The native vegetation, established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be well established and between approximately 2-5m in height, dependent on species / environmental conditions. The new hedgerow will screen the onshore Oakendene substation from the A272. Additional screening of the substation would also be provided by woodland planting that will have matured behind the hedge also making a positive contribution to the character and appearance of the road corridor, in addition to existing trees (W792) which will be retained. The magnitude of change will reduce to **Negligible** (all seasons) as a result of the presence of the remaining access affecting up to 200m of the A272, to **Negligible – Zero** for the remainder of the route. The effects on the A272 will consequently range from **Minor / Negligible (Not Significant)** affecting up to 200m of the A272 to **Minor / Negligible to No Effect (Not Significant)**. The nature of these effects will be long-term, direct and neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore Oakendene substation will be barely visible as the native woodland buffer and existing hedgerow will be well established. The magnitude of change on the view will be **Negligible – Zero** (all seasons) from much of this route. The effects on the A272 will be **Minor / Negligible (Not Significant)**. The nature of these effects will be short-term, temporary, direct and beneficial / neutral.

Whole Proposed Development residual effects:

Transport Routes: A272

The onshore cable corridor will not be visible from this route. The offshore elements of the Proposed Development will not be visible from this route. Therefore, the whole Proposed Development residual effects will be limited to views of the onshore substation at Oakendene as assessed above.

Cumulative effects assessment:

None of the cumulative developments including the cluster of energy related development (ID 50, 51, 52, 54, 56 and 57 as set out in **Table 18-39**) which includes Solar farm and battery storage development to the north-east of the existing National Grid Bolney substation and south of Coombe Farm will be visible from this route due to the layering effect of intervening vegetation, even in the winter. Therefore, there will be no cumulative effects.

Transport Routes: A281

The A281 is routed north-south through Cowfold towards in the west of the LVIA Study Area. It is located approximately 1.5km distance west of the substation at Oakendene and 0.9km west of the proposed DCO Order Limits containing the Oakendene West **temporary** construction compound, at its nearest point within Cowfold. The ZTV (**Figure 18.2** of the ES (Document Reference 6.3.18)) illustrates very limited theoretical visibility of the onshore substation between south of Cowfold at Cowfold Lodge and west of Little Parkminster, however, in reality, views along this stretch of transport route will be screened by a combination of intervening roadside and other vegetation even in winter and built-form. The remainder of the A281 within the **LVIA** Study Area is outwith the ZTV.

Sensitivity to change

The A281 is not a designated tourist route and does not pass through an area designated for its scenic value. The value of the A281 is therefore assessed as Medium. Most of the road users will experience the landscape transiently whilst driving or cycling and experiencing a sequence of views, often in one direction focused on the direction of travel and often experienced at speed indicating a Medium susceptibility. To conclude, the sensitivity of road users on the A281 has been assessed as **Medium**.

Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with the onshore substation will not be visible from any part of the A281 including between south of Cowfold at Cowfold Lodge and west of Little Parkminster due to screening from intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**.

There will be **no effect** on the views from this route.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The onshore substation will not be visible from any part of the A281 due to screening from intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Transport Routes: A281

Magnitude of change and significance of residual effects: Year 5

As assessed in Year 1, the onshore substation will not be visible from the route and the magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Magnitude of change and significance of residual effects: Year 10

As assessed in Year 1, the onshore substation will not be visible from the route and the magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore substation will not be visible from the A281 due to screening from intervening vegetation, even in the winter. The magnitude of change will therefore be **Zero**, assuming the maintenance of the existing baseline. There will be **no effect** on the views from this route.

Whole Proposed Development residual effects:

The onshore cable corridor will not be visible from this route.

The offshore elements of the Proposed Development will not be visible from this route. Therefore, there will be no whole Proposed Development residual visual effects.

Cumulative effects assessment:

None of the cumulative developments will be visible from this route and there will be no cumulative visual effects.

Transport Routes: Kent Street

Kent Street is a densely vegetated route which connects the A272 with Wineham Lane in the centre of the LVIA Study Area. It passes along the eastern boundary of the onshore substation. Viewpoint SA1 (**Figure 18.10, Volume 3** of the ES (Document Reference: 6.3.18)) is located along Kent Street. The ZTV (**Figure 18.2 and 18.7a-iii, Volume 3** of the ES (Document Reference: 6.3.18)) illustrates maximum theoretical visibility of the onshore substation for approximately 1km of Kent Street between the A272 junction and south of Westridge Farm as the route passes to the east of the onshore substation at Oakendene and to the east of the proposed DCO Order Limits. In reality, due to the densely vegetated nature of Kent Street, views will be screened and filtered through gaps in the roadside vegetation with the greatest views in the winter. There will be no visibility of the onshore substation from the remainder of Kent Street due to the layering effect of intervening vegetation, even in the winter.

Sensitivity to change

High to Medium: The transport route is not a designated tourist route and does not pass through an area designated for its scenic value. The value of the transport route is therefore assessed as Medium. Most of the road users will experience the landscape transiently whilst driving, cycling, horse riding or walking and experiencing a sequence of enclosed views, often in one direction and focused on the direction of travel (Medium

Transport Routes: Kent Street

susceptibility). Walkers and horse riders will be travelling at a slower pace and have been assessed as of High sensitivity. Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with building the onshore Oakendene substation will be partially visible to the west through small gaps in the trees and hedgerows for approximately 1km of the route as it passes the eastern boundary of the onshore Oakendene substation. The movement of other machinery, including mobile cranes and a 20m high concrete batching plant associated with the construction works will also be partially visible in these views, appearing above the perimeter close-boarded fence that will be visible in its own right, and beyond existing trees and shrubs / hedgerow screening. Local task and vehicle lighting may be visible in poor weather / light conditions. Hedgerow H505 and woodland W738 and W1413 along the route will be retained although the appearance of this part of Kent Street will alter due to an increase in construction traffic, the enlargement of the junction with the A272 (entailing the removal of vegetation on the corner), the creation of passing places within the verge and the construction accesses (A-61 and A-64 assessed as part of the cable corridor construction in **Appendix 18.4: Visual assessment, Volume 4** of the ES[APP-170]. Where possible the native tree and understorey shrub planting will be carried out in advance of the construction works in front of the close-boarded fence. From the remainder of Kent Street, there will be no visibility of the construction works due to the layering effect of intervening vegetation, even in the winter. The magnitude of change will range from **Medium - high** from up to 1km of Kent Street, reducing to **Medium** in the summer, to **Negligible - Zero** for the remainder of Kent Street.

The level of visual effect on Kent Street will range from **Major to Moderate (Significant)** for up to 1km of Kent Street, reducing to **Minor / Negligible (Not Significant)** for the remainder of this route. The nature of these effects will be short-term, temporary, direct and adverse to neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The onshore Oakendene substation and its components will be partially visible above the close-boarded fence that will provide screening but still remain visible in its own right for approximately 1km of Kent Street as it passes the eastern boundary of the onshore Oakendene substation with the top of Gas Insulated Substation (GIS) building visible at approximately 50m distance. However, the surrounding field boundary vegetation (H505, W738 and W4113), which is retained, provides some mitigation in the form of visual containment and partial / filtered screening. The proposed native tree and understorey shrub planting (established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be visible but not established. Apart from downward lighting which will only be used when required for maintenance outages or emergencies occurring at night, there will be no other lighting associated with the onshore Oakendene substation. From the remainder of Kent Street, there will be no visibility of the onshore Oakendene substation due to the successive layering effect of intervening vegetation, even in the winter. The magnitude of change will range from **Medium**, up to 1km of Kent Street, (reducing to **Low** in the summer) to **Negligible - Zero** for the remainder of Kent Street. The effects on Kent Street will range from **Major / Moderate to Minor (Significant)** up to 1km of Kent Street

Transport Routes: Kent Street

to **Minor / Negligible (Not Significant)** for the remainder of Kent Street. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 5

The native tree and understorey shrub planting (established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) along the field boundary will be established and between approximately 2-5m in height, dependent on species / other environmental factors. With the removal of the close-boarded fence the magnitude of change on the view will be **Medium** in the winter months, reducing to **Low** in the summer months when all vegetation is in leaf.

The effects on Kent Street will range from **Major / Moderate** to Minor (**Significant**) up to 1km of Kent Street to **Minor / Negligible (Not Significant)** for the remainder of Kent Street. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 10

The native tree and understorey shrub planting (established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be well established and between approximately 4-8m in height, dependent on species / other environmental factors, which will largely screen most of the onshore Oakendene substation and the magnitude of change on the view will reduce to **Low** in the winter months and **Negligible** in the summer months when all vegetation is in leaf.

The effects on Kent Street will range from **Moderate / Minor (Not Significant)** to **Minor / Negligible** significance (**Not Significant**). The nature of these effects will be long-term, direct and adverse to neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore substation will be barely visible from the route as the native tree and understorey shrub planting (established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be mature. The magnitude of change on the view will be **Low to Negligible-Zero** on completion of decommissioning. The effects on the views from Kent Street will range from **Moderate / Minor** to **Minor / Negligible (Not Significant)**. The nature of these effects will be short-term, temporary, direct and beneficial / neutral.

Whole Proposed Development residual effects:

There will be whole Proposed Development effects of Major to Moderate significance (Significant) on the views from combined 1.5km section of Kent Street during the construction period as a result of both the onshore Oakendene substation and onshore cable corridor. During the operation and maintenance period (Years 1-5) significant effects will result from the onshore Oakendene substation only with the effects mitigated by planting thereafter.

The offshore elements of the Proposed Development will not be visible from this transport route.

Cumulative effects assessment:

Transport Routes: Kent Street

None of the cumulative developments will be visible from Kent Street. Therefore, there will be no cumulative effects.

Visual effects on views from recreational routes

- 18.9.87 The visual assessment has considered the potential visual effects likely to be experienced by people (walkers / cyclists / horse riders / joggers / others) on recreational routes included in the assessment baseline as described in **Table 18-21**. The recreational routes are illustrated in **Figure 18.9a**iii, **Volume 3** of the ES (Document Reference 6.3.18) and those assessed include:
- PRoW 1786 and 1787 between Kent Street, Taintfield Wood and A272;
 - PRoW 1788 between west of Taintfield Wood Oakendene Industrial Estate; and
 - PRoW 1775 and 1777 near Eastlands Farm.
- 18.9.88 Each of these recreational routes were walked and / or visited and walked in sections according to the ZTV coverage and the assessment has been assisted on-site with the use of wirelines and ZTVs.
- 18.9.89 All of the recreational routes have been assessed as of **High** sensitivity on account of their High to Medium value as recreational routes, and the High susceptibility of the people using these recreational routes, mostly walkers, whose attention will be focused on the landscape around them.
- 18.9.90 In summary, significant effects will be limited to sections of recreational routes PRoW 1786, 1787 and 1788.

Table 18-34 Oakendene substation – visual effects on views from Recreational routes

Recreational routes: PRoW 1786 and 1787 between Kent Street, Taintfield Wood and A272

PRoW 1787 is routed between Kent Street and Taintfield Wood, where it meets PRoW 1786, routed between east of Taintfield Wood and the A272 via Oakendene Industrial Estate. PRoW 1786 crosses the southwestern corner of the proposed DCO Order Limits, west of the onshore Oakendene substation, however, it is physically unaffected by the onshore Oakendene substation footprint and would be subject to a short diversion (PRoW 1788) during the construction works. The ZTV (**Figure 18.9c**, **Volume 3** of the ES (Document Reference 6.3.18)) indicates theoretical visibility from much of this recreational route. Viewpoint SA3 (**Figure 18.12**, **Volume 3** ([**REP4-027**], updated at Deadline 4) is located on this route (PRoW 1786) at Taintfield Wood. Viewpoint SA12 (**Figure 18.14.4**, **Volume 3** ([**REP4-027**], updated at Deadline 4) is located on PRoW 1787 further to the east of Taintfield Wood, viewing through a gap in the hedge, from a position within the onshore cable corridor route.

Recreational routes: PRoW 1786 and 1787 between Kent Street, Taintfield Wood and A272

A further Viewpoint SA13 ([Figure 18.14.5, Volume 3 \(\[REP4-027\]](#), updated at Deadline 4) is located to the east of the lake, viewing a gap in the hedgerow / field access on the southwestern corner of the Oakendene onshore substation.

Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with the building of the onshore Oakendene substation components will be visible from PRoW 1787 through a gap in the hedge as illustrated in Viewpoint SA12. A similar view emerges as PRoW 1786 exits Taintfield Wood as illustrated in Viewpoint SA3. The route will be subject to short diversions to allow for cable corridor construction, but when not diverted walkers will be able to view the construction activity at Oakendene substation through the gaps in H497 (notched to 14m) beyond some mature perimeter trees along the southern edge of the onshore substation. This will include the temporary construction compound, further to the north, including a concrete batching plant up to 20m in height and mobile cranes. Other construction activity would include vehicle movements and welfare facilities, local task and vehicle lighting. Walkers would be able to see the construction of the substation (buzz-bars and substation building) with only the lightning protection mast would be visible above the skyline. Native tree and understorey shrub planting (established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS \[REP3-013\]](#) will be visible but not yet established. Walkers would be closest to the construction works at Viewpoint SA13, although the gap would have been planted up pre-commencement of the onshore substation works and site preparation works to provide dormouse habitat, resulting in some partial screening. The magnitude of change would range between High to Medium and affect a total of approximately 400m of the route, excluding Taintfield Wood. It is likely that significant visual effects would continue for a further approximately 250m as the route is diverted around the edge of the temporary construction compound at Oakendene West until it reaches the A272. As the recreational route passes through Oakendene Industrial Estate, there will be limited views due to the screening of industrial buildings within the estate. The magnitude of change will range from High to Medium (for much of the recreational route, approximately 650m) to Negligible-Zero (through the Oakendene Industrial Estate). The effects on PRoW 1786 and part of PRoW 1787 will range from **Major** to **Major / Moderate** (Significant) (for much of the recreational route) to **Minor** (Not Significant) (through the Oakendene Industrial Estate). The nature of these effects will be short-term, temporary, direct and adverse to neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

Walkers on PRoW 1787 will be able to view the onshore Oakendene substation, through the gap in the hedge as illustrated in Viewpoint SA12. A similar view emerges as PRoW 1786 exits Taintfield Wood as illustrated in Viewpoint SA3 with Oakendene substation visible beyond some mature perimeter trees along the southern edge of the onshore substation. Parts of the GIS building, substation busbars and fire walls will be visible through gaps in the boundary vegetation. Native tree, woodland and shrub planting (established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS \[REP3-013\]](#) will be visible but not yet

Recreational routes: PRoW 1786 and 1787 between Kent Street, Taintfield Wood and A272

established. Walkers would be closest to the construction works at Viewpoint SA13, although the gap would have been planted up pre-commencement of the onshore substation works and site preparation works to provide dormouse habitat, resulting in some partial screening. The magnitude of change would range between High to Medium and affect a total of approximately 400m of the route, excluding Taintfield Wood. As the recreational route passes through Oakendene Industrial Estate, there will be limited views due to the screening of industrial buildings within the estate. The temporary construction compound at Oakendene West will have been reinstated.

The magnitude of change will range from High to Medium (for much of the recreational route, approximately 400m) to Negligible-Zero (through the Oakendene Industrial Estate). The effects on PRoW 1786 and part of PRoW 1787 will range from **Major** to **Major / Moderate** (Significant) to **Minor** (Not Significant) (through the Oakendene Industrial Estate). The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 5

By Year 5 the views from PRoW 1787 (Viewpoint SA12) and PRoW 1786, exiting Taintfield Wood (Viewpoint SA3) will have altered little due to the elevated nature of these viewpoints, viewing 'down' into the substation. Although the native planting (established as part of the [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS \[REP3-013\]](#) will be established and visible at between approximately 2-5m in height, dependent on species / other environmental factors and the magnitude of change will range from Medium-high to Medium, affecting approximately 175m of the route. At lower elevation, close to the lake (Viewpoint SA13) the screening effect of native planting will reduce the magnitude of change to Medium-low. The effects on PRoW 1786 and part of PRoW 1787 will range from **Major / Moderate** to **Moderate** (Significant) affecting approximately 175m of the route and reducing to **Moderate** or less (Not Significant) from the remainder of the route. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 10

By Year 10 the views from PRoW 1787 (Viewpoint SA12) and PRoW 1786, exiting Taintfield Wood (Viewpoint SA3) the native planting (established as part of the [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in the [DAS \[REP3-013\]](#) will be established and visible at between approximately 4-8m in height, dependent on species / other environmental factors and the magnitude of change will range from Medium to Low, affecting approximately 175m of the route. At lower elevation, close to the lake (Viewpoint SA13) the screening effect of native planting will reduce the magnitude of change to Low to Negligible. The effects on PRoW 1786 and part of PRoW 1787 will range from **Moderate** (Significant) affecting approximately 175m of the route and reducing to **Moderate to Minor** or less (Not Significant) from the remainder of the route. The nature of these effects will be long-term, direct and adverse to neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the onshore Oakendene substation will be largely screened by native tree planting which will be mature (established as part of [Appendix D Oakendene onshore substation Indicative Landscape Plan](#) illustrated in

Recreational routes: PRoW 1786 and 1787 between Kent Street, Taintfield Wood and A272

the **DAS** (Document Reference 5.8). The magnitude of change on the view will range from **Low** (near Taintfield Wood) to **Negligible - Zero** (remainder of the recreational route and Oakendene Industrial Estate). The effects on PRoW 1786 and 1787 will range from **Moderate to Minor (Not Significant)**. The nature of these effects will be short-term, temporary, direct and adverse to beneficial / neutral.

Whole Proposed Development residual effects

There will be localised **significant (Major to Major / Moderate)** whole Proposed Development effects on the views from part of PRoWs 1787 and 1786 as a result of both the onshore Oakendene substation and onshore cable corridor (which crosses the route of PRoW 1787).

The offshore elements of the Proposed Development will not be visible from this recreational route.

Cumulative effects assessment

None of the cumulative developments will be visible from this recreational route. Therefore, there will be no cumulative effects.

Recreational routes: PRoW 1788 between west of Taintfield Wood and Oakendene Industrial Estate

PRoW 1788 is routed between the south and west of Taintfield Wood and Oakendene Industrial Estate where it joins with PRoW 1786. The ZTV (**Figure 18.9c, Volume 3** of the ES (Document Reference 6.3.18) indicates theoretical visibility from much of this recreational route although in practice much of the route is screened by mature trees and woodland associated with Taintfield Wood and the lake. Viewpoint SA7 (**Figure 18.13, Volume 3** of the ES (Document Reference 6.3.18)) is located on this recreational route west of Taintfield Wood.

Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with the building of the onshore Oakendene substation components will be partially visible to the northeast through gaps in intervening vegetation beyond the lake as the route emerges from the southwest corner of Taintfield Wood as illustrated in Viewpoint SA7 (**Figure 18.13, Volume 3** of the ES (Document Reference 6.3.18)) at approximately 321m distance. Other machinery, vehicle movements and welfare facilities associated with the construction works including the Oakendene West temporary construction compound will also be partially visible in these views. Local task and vehicle lighting may be visible in poor weather / light conditions. Native tree planting (established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the **DAS** (Document Reference 5.8) will be visible where advance planting has been undertaken. All intervening vegetation visible in the foreground and middle distance from the route will be retained. As the PRoW drops down slightly in elevation towards the southern end of Oakendene Industrial Estate, views of the construction works at the onshore substation to the east will be screened by the to industrial buildings, however, views of the Oakendene West

Recreational routes: PRow 1788 between west of Taintfield Wood and Oakendene Industrial Estate

temporary construction compound to the west of the Oakendene Industrial Estate will be visible at close distance until the footpath joins PRow 1786. The views will be in the context of large pylons and overhead lines, and buildings of the Industrial Estate. The magnitude of change will be High (all seasons) for much of the recreational route as a result of the Oakendene West temporary construction compound and Low (all seasons) as a result of the onshore Oakendene substation. The effects on PRow 1788 will range from **Major** (Significant) (for much of the recreational route due to the Oakendene West temporary construction compound only) to **Moderate (Significant)** as a result of the onshore Oakendene substation. The nature of these effects will be short-term, temporary, direct and adverse.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The Oakendene West temporary construction compound will have been reinstated. Visual effects will be limited to views of the onshore Oakendene substation, including the upper parts of busbars as illustrated in Viewpoint SA7 (**Figure 18.13, Volume 3** of the ES [REP4-027]). Mature vegetation associated with Taintfield Wood, field boundaries and the lake will provide some mitigation in the form of visual containment and screening thereby limiting the overall visibility of the onshore Oakendene substation from approximately 50m of the route viewed at approximately 250m distance. Native tree planting, including parkland trees (established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the DAS (Document Reference 5.8) will also be visible but not established. Apart from downward lighting which will only be used when required for maintenance outages or emergencies occurring at night, there will be no other lighting associated with the onshore Oakendene substation. There will be no visibility of the onshore substation beyond Oakendene Industrial Estate. The magnitude of change will be Low (all seasons). The effects on PRow 1788 will range from **Moderate (Not Significant)**. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 5

The native tree planting (established as part of the **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the DAS (Document Reference 5.8) will be visible at between approximately 2-5m in height, dependent on species / other environmental factors and will further screen parts of the onshore Oakendene substation (busbars and access track) from the route between Taintfield Wood and Oakendene Industrial Estate. The magnitude of change will be **Low** (all seasons). The effects on PRow 1788 will range from **Moderate (Not Significant)**. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 10

The native tree planting (established as part of **Appendix D Oakendene onshore substation Indicative Landscape Plan** illustrated in the DAS (Document Reference 5.8) will be well established and visible at between approximately 4-8m, dependent on species / other environmental factors. This will further screen parts of the onshore Oakendene substation (busbars and access track) from the route between Taintfield Wood and Oakendene Industrial Estate. The magnitude of change will be **Low** to

Recreational routes: PRow 1788 between west of Taintfield Wood and Oakendene Industrial Estate

Negligible - Zero (all seasons). The effects on PRow 1788 will range from **Moderate to Minor (Not Significant)**. The nature of these effects will be long-term, direct and neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Visibility of the decommissioning works associated with the onshore Oakendene substation will be limited from the route as the native wet woodland, parkland trees and existing vegetation will be mature. The magnitude of change will range from **Negligible - Zero** (all seasons) and the level of effect will be **Minor (Not Significant)**. The nature of these effects will be long-term, direct and neutral.

Whole Proposed Development residual effects

The onshore cable corridor will not be visible from this recreational route. The offshore elements of the Proposed Development will not be visible from this recreational route. Therefore, the whole Proposed Development residual effects will be limited to views of the onshore Oakendene substation as assessed above.

Cumulative effects assessment

None of the cumulative developments will be visible from this route. Therefore, there will be no cumulative effects.

Recreational Routes: PRow 1775 and 1777 near Eastlands Farm

PRow 1775 and 1777 are two footpaths near Eastlands Farm at Cowfold that connect to Kings Lane in the southeast and Crateman's Farm in the south. They are located approximately 700m distance to the southwest of the onshore Oakendene substation at its nearest point. The ZTV ([Figure 18.9c, Volume 3](#) of the ES (Document Reference 6.3.18)) indicates very limited theoretical visibility from these recreational routes and views towards the onshore Oakendene substation will be completely screened by a combination of landform and the layering effect of intervening vegetation, even in the winter.

Viewpoint SA4 is located on this route which has been omitted from the LVIA due to no visibility of the onshore Oakendene substation.

Given there is no visibility of the onshore Oakendene substation from both routes due to screening by a combination of landform and the successive layering effect of intervening vegetation, even in the winter, there would be no effect on these routes, and they are therefore not assessed further.

Whole Proposed Development residual effects

The onshore cable corridor will not be visible from these recreational routes. The offshore elements of the Proposed Development will not be visible from these recreational routes. Therefore, there will be no whole Proposed Development residual effects.

Cumulative effects assessment

Recreational Routes: PRow 1775 and 1777 near Eastlands Farm

None of the cumulative developments will be visible from these routes. Therefore, there will be no cumulative effects.

Visual effects on views from recreational and tourist destinations

- 18.9.91 Wineham Lane Caravan Park is outwith the ZTV and will have no visibility of the onshore Oakendene substation and therefore there will be **no effect**.

18.10 Assessment of effects: Existing National Grid Bolney substation extension

Introduction to landscape effects

- 18.10.1 An introduction to landscape effects is set out in **Section 18.9**. As set out in the baseline in **Section 18.6, Table 18-22**, the landscape assessment for the onshore substation extension at the existing National Grid Bolney substation only includes the 'host' LCAs. Effects on the surrounding landscape character and designated landscapes are excluded from the assessment due to the tight visual envelope and the lack of intervisibility with other LCAs and the AONB.
- 18.10.2 The assessment of cumulative landscape effects of the onshore elements of the Proposed Development and whole Proposed Development effects have been assessed and reported for each receptor in this section with a summary provided in **Section 18.14**.

Summary of landscape effects

- 18.10.3 In summary, there will be no significant effects on landscape character (notably the LW1: Hickstead Low Weald LCA) as a result of the existing National Grid Bolney substation extension, during the construction, operation and maintenance and decommissioning phases. This is due to the existing vegetation screening, and the presence of other existing energy infrastructure development, most notably the existing National Grid Bolney substation and the Rampion 1 onshore substation and associated pylons which characterise the local area. Some native tree planting is also proposed as shown in the **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** illustrated in the **DAS [REP3-013]**.

Landscape effects on the 'host' Landscape: Hickstead Low Weald LCA

- 18.10.4 The 'host' landscape of the existing National Grid Bolney substation extension (GIS or AIS options) is the LW1: Hickstead Low Weald LCA in Mid-Sussex, with is part of the county landscape character type LW10: Eastern Low Weald within West Sussex and Area 34: Adur Valley and Catchment HLC, as illustrated in **Figure 18.5a, Volume 3** of the ES (Document Reference: 6.3.18).

18.10.5 This landscape comprises a lowland mixture of pastoral and arable fields with a strong hedgerow pattern, overlaying low ridges and clay vales drained by the upper Adur streams. The LW1: Hickstead Low Weald LCA occupies the majority of the 2km LVIA Study Area. Views within this area are largely contained by a mix of woodland, roadside, hedgerow vegetation and mature trees. Where there are longer range views the steep downland scarp to the south and the High Weald fringes to the north are notable features of the horizons. Viewpoints SB1, SB3, SB6 and SB7 are located within this landscape and illustrated in **Figures 18.15-18, Volume 3** of the ES [REP4-027]).

18.10.6 The key characteristics as defined in the relevant landscape character assessments (West Sussex County Council, 2003 and Mid Sussex County Council, 2005) state:

“Alternating west-east trending low ridges with sandstone beds and clay vales carrying long, sinuous upper Adur streams.

Views dominated by the steep downland scarp to the south and the High Weald fringes to the north.

Arable and pastoral rural landscape, a mosaic of small and larger fields, scattered woodlands, shaws and hedgerows with hedgerow trees.

Quieter and more secluded, confined rural landscape to the west, much more development to the east, centred on Burgess Hill.

Biodiversity in woodland, meadowland, ponds and wetland.

Mix of farmsteads and hamlets favouring ridgeline locations, strung out along lanes.

A modest spread of designed landscapes and major landmark of Hurstpierpoint College.

Crossed by north-south roads including the A23 Trunk Road, with a rectilinear network of narrow rural lanes.

London to Brighton Railway Line crosses the area through Burgess Hill.

Varied traditional rural buildings built with diverse materials including timberframing, weatherboarding, Horsham Stone roofing and varieties of local brick and tile-hanging.

Principal visitor attraction is the Hickstead All England Equestrian Showground.”

18.10.7 In addition, the key landscape characteristics defined in the West Sussex County Council (2013) High Weald Local Distinctiveness Guidance include:

“The tranquil, intimate and enclosed rural character of the area

The qualities of fine long views from ridges

Exposures of sandstone

The network of ancient woodland including larger deciduous woodlands, ghyll woodlands and shaws

Mixed woodlands on the plateau replacing coniferous over time

Areas of heathland

The qualities of the River Ouse, its valley bottom and lower sides with medium-large scale field patterns of wet meadows and pastures bounded by hedges with trees

The fine grain and irregular pattern of assart fields [around 0.4Ha. /1 acre]

Shaws enclosing fields and linking into, and integrating settlement

The dense network of hedgerows, restoring where necessary, retaining the oak standards and other hedgerow trees

Network and character of sinuous un-kerbed deep lanes, ancient droveways, greenways, tracks and footpaths

Mill sites and ponds, hammer ponds, ornamental lakes and ponds

Narrow field entrances and traditional gates

Designed landscapes associated with large country houses and their settings, avoiding the spread of invasive species such as rhododendron.”

- 18.10.8 However, at a localised level the overriding characteristics of the existing National Grid Bolney substation extension site are the existing energy related infrastructure developments, notably the Rampion 1 onshore substation, and the National Grid Bolney substation and associated pylons.
- 18.10.9 The most relevant landscape elements in the immediate locality are the arable and pasture fields to the north and south, mature trees and woodland to the east, including ancient woodland to the north and a mixture of trees, hedgerows and shrubs surrounding the existing substations that entails some previously established mitigation planting for Rampion 1.
- 18.10.10 The HLC (WSCC, 2010) of this LCA largely overlaps with the Medieval period with some parts overlapped with a range of Post Medieval to Modern (the existing National Grid Bolney and Rampion 1 substations), and World War 1 to World War II periods, with the area to the south-east / east overlapped with the Early Medieval / Dark Age and Medieval to Post Medieval periods, as illustrated in **Figure 25.2.2h, Appendix 25.2: Onshore historic environment desk study, Volume 4** of the ES (Document Reference: 6.4.25.2).

Landscape sensitivity of the ‘host’ landscape

Introduction

- 18.10.11 Landscape sensitivity has been assessed through a combination of the value of the landscape and its susceptibility, in accordance with GLVIA 3 (Landscape Institute and IEMA, 2013) and the methodology set out in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1).

Landscape value

- 18.10.12 Landscape planning designations illustrated in **Figure 18.6a-b, Volume 3** (Document Reference: 6.3.18) show that no part of the LW1: Hickstead Low Weald LCA is within a locally or nationally designated landscape. The High Weald AONB is located 2.5km to the north of the existing National Grid Bolney substation extension site and site surveys, ZTV and viewpoint analysis has revealed limited intervisibility between the existing National Grid Bolney substation extension and the AONB. In overall terms, the LW1: Hickstead Low Weald LCA has a sense of place and local level distinctiveness, with a simple, rural character, network of fields with strong hedgerow field boundaries, scattered mature deciduous field boundary trees and woodlands, which contribute to the local landscape quality. There is also some intrusion of suburbanisation with industrial estates, A roads, horse paddocks and pylons. Large-scale modern agricultural buildings also influence scenic quality, especially where there is inadequate screening. Recreational use is generally limited to local recreational walking and horse riding along PRow and informal road cycling. The Hickstead All England Equestrian Showground is located over 2km from the proposed DCO Order Limits.
- 18.10.13 Local to the existing National Grid Bolney substation extension site the existing energy related infrastructure developments, notably the Rampion 1 onshore substation, and the National Grid Bolney substation and associated pylons reduce the local landscape value.
- 18.10.14 Overall, the landscape value of the LW1: Hickstead Low Weald LCA is **Medium**, increasing to **High - medium** closer to the AONB in the north of the LVIA Study Area. At a localised level this reduces to **Low** due to the influence of the existing energy related infrastructure.

Landscape susceptibility

- 18.10.15 The Landscape Character Assessment for Mid Sussex (LCA) (Mid Sussex District Council, 2005) states that the “*Parts of the area are visually exposed to views from the downs with a consequently high sensitivity to the impact of new development and the cumulative visual impact of buildings and other structures.*” Indicators of lower susceptibility include the sense of enclosure and limited visibility due to the rolling landform, and the network of trees, hedges and woodland which prevent longer views from within the LCA. Susceptibility is also reduced by the presence of the existing energy related infrastructure developments, notably the Rampion 1 onshore substation, and the existing National Grid Bolney substation and associated pylons which have characterised this locality. The landscape susceptibility of the onshore substation is therefore assessed as **Low**.

Overall sensitivity

- 18.10.16 The overall sensitivity to change considering all of the factors within the landscape character assessments, and the assessment of Low value and Low susceptibility in the vicinity of the existing National Grid Bolney substation is assessed as **Low**. This would however increase to **Medium** closer to the AONB in the north of the LVIA Study Area.
- 18.10.17 Landscape elements are indicative of higher levels of sensitivity as they are not easily replaced.

Magnitude of change and significance of residual effects: during construction

- 18.10.18 There is potential for both physical changes to landscape elements and landscape character resulting from the alteration / loss of these features; as well as the introduction of new features associated with the construction of the existing National Grid Bolney substation extension during the construction phase. However, as previously noted, the substation extension is located between the existing National Grid Bolney substation to the immediate north and west and the Rampion 1 onshore substation to the north-east, with mature woodland to the immediate east.
- 18.10.19 There are some trees within the onshore substation footprint that will be permanently lost (W3712a and W3712c – 0.12ha in total), however, the surrounding trees, hedgerows and woodland to the south and east will be retained.
- 18.10.20 The construction of the existing National Grid Bolney substation extension (GIS or AIS option) will result in a small change to the local character of this landscape and the loss of a small number of landscape elements as noted above. The geographical extent of the landscape effects will extend to within the existing National Grid Bolney substation extension footprint, due to the presence of existing substation infrastructure to the immediate west, north and north-east, and further containment to the east by existing trees / woodland. A change in character would extend across the pasture field to the south as far as Bob Lane (200m). The construction works will include a temporary construction compound located on an area of hardstanding to the north of the existing National Grid Bolney substation, access track from the existing National Grid substation, together with vehicles, machinery, cranes and the stockpiling of materials that will be needed during construction. The construction works will result in changes in ground conditions / profiles, installation of infrastructure, fencing and installation of electrical infrastructure. Even with the construction works, the character of the local landscape will barely change except for within the existing National Grid Bolney substation extension and temporary construction compound footprints. As the existing National Grid Bolney substation extension is constructed, the form of the buildings and external electrical infrastructure will take shape. The built form will be similar to the existing National Grid Bolney substation infrastructure already present adjacent to the existing National Grid Bolney substation extension which provides visual containment to the north and west. The surrounding mature trees and woodland to the east and south provide further visual containment of the substation extension.
- 18.10.21 In terms of the likely effects on landscape character, the magnitude of change within the onshore substation footprint and in the immediate vicinity (extending 200m to Bob Lane) will range from **Zero to Medium** during the construction phase. Beyond this area, the landscape is generally contained, restricting indirect effects on the perception of landscape character beyond the onshore substation to the extent that they will be **Negligible to Zero**.
- 18.10.22 Taking account of the **Low** sensitivity, and **Zero to Medium** magnitude of change, the residual effects on the 'host' LW1: Hickstead Low Weald LCA and landscape elements during the construction phase will increase through the construction period to range from **none to Minor (Not Significant)** upon completion. The

duration of these residual effects will be short-term and the nature of these effects will be temporary, direct, and adverse.

- 18.10.23 Considering the ‘host’ landscape as a whole and the increased sensitivity of the wider landscape, the residual effects will range from **none** to **Minor / Negligible** and **Not Significant** in overall terms due to the reduced or zero magnitude of change affecting the wider landscape character.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 1)

- 18.10.24 During operation, the completed existing National Grid Bolney substation extension (GIS or AIS option) will gain a more 'settled' appearance when compared to the same area during the construction phase and planting involving native trees will be established as illustrated in the [Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan](#) and [DAS](#) (Document Reference: 5.8) and further explained in the [Outline LEMP](#) (Document Reference: 7.10).
- 18.10.25 Native tree planting to the south will strengthen the existing landscape network and will have been planted as part of the pre-construction, advance planting and during Year 1, but these will not yet be established. The existing woodland, trees and hedgerows to the east and south will continue to provide visual containment and screening from these directions with the existing National Grid Bolney substation providing visual containment to the north and west.
- 18.10.26 In terms of the likely effects on landscape character, the magnitude of change will be **Medium** during Year 1, affecting the existing National Grid Bolney substation extension footprint and in the immediate vicinity (extending 200m to Bob Lane).
- 18.10.27 Taking account of the **Low** sensitivity and **Medium** magnitude of change, the residual effects on the ‘host’ LCA and landscape elements will be **Minor (Not Significant)**. The nature of these residual effects will be long-term (reversible), direct and adverse to neutral as they reflect the existing landscape character and fall largely within an area of landscape that is already characterised by energy infrastructure.
- 18.10.28 Considering the ‘host’ landscape as a whole and the increased sensitivity of the wider landscape, the residual effects will be **Minor / Negligible** and **Not Significant** in overall terms due to the reduced magnitude of change affecting the wider landscape character.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 5)

- 18.10.29 At Year 5, the native tree planting described in [Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan](#) (illustrated in the [DAS](#) (Document Reference: 5.8) and further explained in the [Outline LEMP](#) (Document Reference: 7.10) will have established. The native tree planting will be between approximately 2-5m in height, dependent on species and will strengthen the “*strong pattern of woodland, shaws and hedgerows*” in line with the existing landscape character beyond the confines of the energy infrastructure. Given this

gradual establishment and the continued presence of the existing surrounding vegetation, the magnitude of change will reduce to **Low**.

- 18.10.30 Taking account of the **Low** sensitivity, and **Low** magnitude of change, the residual effects on the 'host' LCA and landscape elements will be **Negligible (Not Significant)**. The nature of these residual effects will be long-term (reversible), direct and neutral.

Magnitude of change and significance of residual effects: during operation and maintenance (Year 10)

- 18.10.31 At Year 10, the native tree planting described in **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** (illustrated in the **DAS** (Document Reference: 5.8) and further explained in the **Outline LEMP** (Document Reference: 7.10) will be well established with tree planting reaching between approximately 4-8m in height, dependent on species. This will further strengthen the "*strong pattern of woodland, shaws and hedgerows*" in line with the existing landscape character beyond the confines of the energy infrastructure. Combined with the continued presence of the existing surrounding vegetation, the magnitude of change will reduce to **Negligible**.
- 18.10.32 Taking account of the **Low** sensitivity, and **Negligible** magnitude of change, the residual effects on the 'host' LCA and landscape elements will be **Negligible (Not Significant)**. The nature of these residual effects will be long-term (reversible), direct and neutral.

Magnitude of change and significance of residual effects: during decommissioning

- 18.10.33 The existing National Grid Bolney substation extension will be decommissioned at the end of the operation and maintenance phase. It has been assumed that the construction compound, used during the construction phase will be re-used and the decommissioning works will involve construction activity and the movement of machinery within the existing National Grid Bolney substation infrastructure context.
- 18.10.34 All visible, above ground structures of the existing National Grid Bolney substation extension will be removed upon decommissioning, thereby rendering the vast majority of the landscape effects as reversible. The area occupied by the existing National Grid Bolney substation extension will be reinstated back to its original condition. It is likely that the native tree planting to the south, established through the operation and maintenance phase will be retained.
- 18.10.35 The magnitude of change during the decommissioning phase will therefore decrease from **Medium** (as with the construction phase) to **Negligible** as the existing National Grid Bolney substation extension is dismantled and the pre-existing landscape reinstated.
- 18.10.36 The residual landscape effect will range from **Minor** to **Negligible (Not Significant)**. The duration of these residual effects in the decommissioning phase will be short-term, similar to the construction phase, and the nature of these effects will be temporary, direct, and adverse to neutral when compared to the pre-existing landscape of the local area.

Whole Proposed Development residual effects

- 18.10.37 There will be whole Proposed Development residual effects of **Major to Moderate significance (Significant)** on the LW1: Hickstead Low Weald LCA (<250m) during construction (landscape character and landscape elements) as a result of the onshore cable corridor only as assessed in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4).
- 18.10.38 The offshore elements of the Proposed Development will have no effect on this landscape.

Cumulative effects assessment

- 18.10.39 The existing National Grid Bolney substation extension will be experienced cumulatively with other energy related development (ID 50, 51, 52, 54, 56 and 57 as set out in **Table 18-39**) which includes Solar farm and battery storage development to the north-east of the existing National Grid Bolney substation and south of Coombe Farm; further battery storage development to the south of the existing National Grid Bolney substation, off Wineham Lane; and grid stability infrastructure development also to the north of the existing National Grid Bolney substation. This will extend and intensify the effects of the existing energy related development on the LW1: Hickstead Low Weald LCA resulting in a High magnitude of change.
- 18.10.40 Whilst the additional cumulative effect of the existing National Grid Bolney substation extension will not be significant (Minor to Negligible), the combined cumulative effects on the LW1: Hickstead Low Weald LCA will be **Major / Moderate (Significant)** as a result of the other cumulative developments, and not the existing National Grid Bolney substation extension. The nature of these effects will be long-term, temporary to permanent, cumulative, direct, and adverse.

Introduction to visual effects

- 18.10.41 An introduction to visual effects is set out in **Section 18.9**. As set out in the baseline in **Section 18.6, Table 18-22**, the visual assessment for the onshore substation extension at the existing National Grid Bolney substation includes one transport route (Bob Lane) and three recreational routes and the Wineham Lane Caravan Park. This reduced list of receptors is due to the tight visual envelope and the lack of intervisibility with other visual receptors in the surrounding area.
- 18.10.42 Annotated photographs / photomontages of the onshore substation are provided from four viewpoint locations and illustrated in **Figures 18.15 to 18.18, Volume 3** (Document Reference: 6.3.18). Each of the viewpoints are assessed in a separate appendix (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)). The viewpoints are:
- SB1: PRoW 34BO south of Coombe House;
 - SB3: Wineham Lane;
 - SB6: PRoW 8T southeast of site; and
 - SB7: Bob Lane.

- 18.10.43 The viewpoint analysis (**Appendix 18.2: Visual analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) indicates that there will be no significant visual effects as a result of the existing National Grid Bolney substation extension during the construction, operation and maintenance and decommissioning phases from any of these viewpoints. This is due to the high level of intervening screening by surrounding mature vegetation / woodland and the existing substation infrastructure associated with the adjacent Rampion 1 and National Grid Bolney substations.
- 18.10.44 There will, however be significant visual effects at viewpoints SB3 and SB6 due to the onshore cable corridor during the construction phase only.
- 18.10.45 Viewpoints SB1 and SB3 will also be cumulatively affected by other developments, and not the onshore elements of the Proposed Development.
- 18.10.46 With regards to Whole Proposed Development effects, none of the viewpoints will be affected by the offshore elements of the Proposed Development.

Summary of visual effects

- 18.10.47 In summary, there will be one significant effect on the views from PRoW 1T as a result of the temporary construction compound for the existing National Grid Bolney substation extension, experienced during the construction and decommissioning phases. There will be no significant visual effects on the remaining receptors including Bob Lane, PRoW 36Bo, PRoW 34Bo or 8T and no view of the existing National Grid Bolney substation extension from Wineham Lane or the Wineham Lane Caravan Park during either of the construction, operation and maintenance or decommissioning phases.
- 18.10.48 In terms of whole Proposed Development effects, significant visual effects are identified as a result of the onshore cable corridor, which will be experienced by receptors on Wineham Lane, and PRoW 1T, during construction.
- 18.10.49 The assessment of cumulative visual effects of the onshore elements of the Proposed Development and whole Proposed Development effects have been assessed and reported for each receptor in this section with a summary provided in **Section 18.14**.

Visual effects on views from transport routes

- 18.10.50 This section of the assessment considers the visual effects on views of the existing National Grid Bolney substation extension from Bob Lane and Wineham Lane.
- 18.10.51 The views from these transport routes will be experienced transiently by road users (mainly drivers and where appropriate cyclists, walkers and horse riders) who will experience the existing National Grid Bolney substation extension as part of the changing sequence of views experienced from the road. These transport routes were driven in both directions in order to assess the potential effects and each assessment has been assessed on-site with the use of sequential wirelines and ZTV maps (**Figure 18.3a-c, Volume 3** (Document Reference: 6.3.18)).

- 18.10.52 In summary, there will be no significant effects on the views from Bob Lane as a result of the existing National Grid Bolney substation extension (GIS or AIS option) and no view of the existing National Grid Bolney substation extension (GIS or AIS option) from Wineham Lane.

Table 18-35 Existing National Grid Bolney substation extension (GIS and AIS options) – Visual effects on views from Transport routes

Transport routes: Bob Lane

Bob Lane is routed east-west connecting Wineham Lane in the west to Twineham Grange in the east. It is located approximately 200m south of the onshore substation extension from western parts of the route. There are filtered views of the existing National Grid Bolney substation to the north. Viewpoint SB7 and omitted viewpoint SB8 are located on this route.

The ZTV illustrates theoretical visibility of the existing National Grid Bolney substation extension (GIS and AIS options) from very limited sections of the route to the immediate south, however, in reality, views along this stretch of route will be screened and filtered through gaps in vegetation, in the winter, as illustrated in Viewpoint SB7 ([Figure 18.18, Volume 3](#) of the ES (Document Reference: 6.3.18)) with almost no views in the summer months when the vegetation is all in leaf. There will be no visibility from the remainder of the route due to the layering effect of successive lines of intervening vegetation.

Sensitivity to change:

High to Medium: The transport route is not a designated tourist route and does not pass through an area designated for its scenic value. The value of the transport route is therefore assessed as Medium. Most of the road users will experience the landscape transiently whilst driving, cycling, horse riding or walking and experiencing a sequence of enclosed views, often in one direction and focused on the direction of travel (Medium susceptibility). Walkers and horse riders will be travelling at a slower pace and have been assessed as of High sensitivity.

Effects during construction

Magnitude of change and significance of residual effects:

There will be filtered views of the construction works associated with the building of the existing National Grid Bolney substation extension (AIS or GIS option) to the north through gaps in the trees and hedgerows (W675) for approximately 200m of the route (mainly in the winter), as illustrated in Viewpoint SB7 ([Figure 18.18, Volume 3](#) of the ES (Document Reference: 6.3.18)). The trees and hedgerow along the northern edge of Bob Lane will be retained during the construction phase and will provide visual containment. Local task and vehicle lighting may be visible in poor weather / light conditions. These filtered views of the existing National Grid Bolney substation extension will be similar to the adjacent already visible existing substation infrastructure as illustrated in Viewpoint SB7 ([Figure 18.18, Volume 3](#) of the ES (Document Reference: 6.3.18)). During the summer, there will be almost no views of the construction works as all the vegetation will be in leaf restricting views to the north. The temporary construction compound will not be visible from this route. From the remainder of Bob Lane, there will be no visibility of the construction works due to the layering effect of intervening vegetation, even in the winter. The magnitude of change will range from **Low** (up to 200m distance) (reducing to **Negligible-Zero** in the summer) and reducing further to **Zero** for the remainder of Bob Lane. The effects on Bob Lane will range from **Minor (Not Significant)** affecting up to

Transport routes: Bob Lane

200m of Bob Lane (in winter) to **No View**. The nature of these effects will be short-term, temporary, direct and adverse to neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The existing National Grid Bolney substation extension (AIS or GIS option) will be partially visible for approximately 200m of the route to the north through gaps in the trees and hedgerows (W675) (mainly in the winter), as illustrated in Viewpoint SB7 (**Figure 18.18, Volume 3** of the ES (Document Reference: 6.3.18)) at 132m distance. At greater distance, successive layers of surrounding field boundary vegetation (W675) which is retained, will provide further mitigation in the form of visual screening and containment. New planting of native trees as illustrated in the **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** and **DAS** (Document Reference: 5.8) and further explained in the **Outline LEMP** (Document Reference: 7.10) will be planted but not yet established.

Apart from downward lighting which will only be used when required for maintenance outages or emergencies occurring at night, there will be no other lighting associated with the onshore Oakendene substation. These screened and filtered views of the existing National Grid Bolney substation extension will be similar to the existing substation infrastructure already partly visible through the vegetation as illustrated in Viewpoint SB7 (**Figure 18.18, Volume 3** of the ES (Document Reference: 6.3.18)). From the remainder of Bob Lane, there will be no visibility of the substation extension due to the successive layering of intervening vegetation, even in the winter. The magnitude of change will range from **Low** (up to 200m distance) (reducing to **Negligible-Zero** in the summer) and reducing further to **Zero** for the remainder of Bob Lane. The effects on Bob Lane will range from **Minor (Not Significant)** affecting up to 200m of Bob Lane (in winter) to **No View**. The nature of these effects will be long-term, direct and adverse to neutral.

Magnitude of change and significance of residual effects: Year 5

New planting to the north of W675 will be established by Year 5, ranging between approximately 2-5m height, dependent on species, and will provide further screening of the existing national Grid Bolney substation extension. The magnitude of change will consequently reduce to **Low – Negligible** in the winter months and **Negligible-Zero** in the summer months when all vegetation is in leaf. The effects on Bob Lane will range from **Minor** to **Minor / Negligible (Not Significant)** in the winter months, affecting up to 200m of Bob Lane, to **No View**. The nature of these effects will be long-term, direct and neutral.

Magnitude of change and significance of residual effects: Year 10

New planting to the north of W675 will be well established by Year 10 and between approximately 4-8m high, dependent on species. This will further screen the existing national Grid Bolney substation extension and the magnitude of change will reduce to **Negligible-Zero** in the summer and winter months affecting up to 200m of Bob Lane. The effects on Bob Lane will range from **Minor / Negligible (Not Significant)** to **No View**. The nature of these effects will be long-term, direct and neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Transport routes: Bob Lane

Decommissioning works associated with the existing National Grid Bolney substation extension will be barely visible from the route as the existing vegetation and mitigation planting along the northern edge of Bob Lane will be well established. The magnitude of change will be **Negligible-Zero** during the winter months, reducing further in the summer months when all vegetation is in leaf. The effects on Bob Lane will range from **Minor / Negligible (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Whole Proposed Development residual effects:

The onshore cable corridor will not be visible from this route.

The offshore elements of the Proposed Development will not be visible from this route. Therefore, the whole Proposed Development residual effects will be limited to views of the onshore substation extension as assessed above.

Cumulative effects assessment:

The existing National Grid Bolney substation extension will be experienced cumulatively with energy storage development at Ghyll Farm to the south of Bob Lane (ID 51 and application ref. DM/21/2554) viewed from different parts of the route. The cumulative effect will be Significant as a result of the Ghyll Farm development, and not the existing National Grid Bolney substation extension. The nature of these effects will be long-term, temporary cumulative, direct, and adverse.

Transport Routes: Wineham Lane

Wineham Lane is routed north-south between Wineham and the A272, passing to the west of the existing National Grid Bolney substation and the junction with Bob Lane.

Sensitivity to change

High to Medium: The transport route is not a designated tourist route and does not pass through an area designated for its scenic value. The value of the transport route is therefore assessed as Medium. Most of the road users will experience the landscape transiently whilst driving, cycling, horse riding or walking and experiencing a sequence of enclosed views, often in one direction and focused on the direction of travel (Medium susceptibility). Walkers and horse riders will be travelling at a slower pace and have been assessed as of High sensitivity.

Effects during construction

Magnitude of change and significance of residual effects:

Construction works associated with the existing National Grid Bolney substation extension will not be visible from Wineham Lane due to the screening effects of the existing National Grid Bolney substation and mature roadside vegetation, even in the winter. The magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The existing National Grid Bolney substation extension will not be visible from Wineham Lane due to the screening effects of the existing National Grid Bolney substation and

Transport routes: Bob Lane

mature roadside vegetation, even in the winter. The magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Magnitude of change and significance of residual effects: Year 5

As assessed in Year 1, the existing National Grid Bolney substation extension will not be visible from the route and the magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Magnitude of change and significance of residual effects: Year 10

As assessed in Year 1, existing National Grid Bolney substation extension will not be visible from the route and the magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the existing National Grid Bolney substation extension will not be visible from Wineham Lane due to the screening effects of the existing National Grid Bolney substation and mature roadside vegetation, even in the winter. The magnitude of change will therefore be **Zero**. There will be **no effect** on the views from this route.

Whole Proposed Development residual effects:

The onshore cable corridor will not be visible from this route.

The offshore elements of the Proposed Development will not be visible from this route. Therefore, there will be no whole Proposed Development residual visual effects.

Cumulative effects assessment:

The existing National Grid Bolney substation extension will not be visible from Wineham Lane and there will be no cumulative effects.

Visual effects on views from recreational routes

- 18.10.53 The visual assessment has considered the potential visual effects likely to be experienced by people (walkers / cyclists / horse riders / joggers / others) on recreational routes within the 2km Study Area as outlined in **Table 18-21**. The recreational routes are illustrated in **Figure 18.7iii** and **Figure 18.9, Volume 3** of the ES (Document Reference: 6.3.18) and those assessed include:
- PRow 1T / 36Bo between Wineham Lane and Coombe House; and
 - PRow 8T / 34Bo between Bob Lane and Coombe House.
- 18.10.54 Each of these recreational routes were walked and/or visited and walked in sections according to the ZTV coverage and the assessment has been assisted on-site with the use of visualisations.
- 18.10.55 All of the recreational routes have been assessed as of **High** sensitivity on account of their Medium value as recreational routes, and the High susceptibility of the people using these recreational routes, mostly walkers, whose attention will be focused on the landscape around them. This assessment is conservative as none of the PRow assessed here are routed through designated landscapes and part of

1T skirts the existing National Grid Bolney substation, which indicates a lower value and sensitivity for that part of the route.

- 18.10.56 In summary, there will be one significant effect on one recreational route within the Study Area. The views and visual amenity experienced by walkers on part of PRoW 1T will be significantly affected for 350m of the route as it passes through the landscape, approximately 50-180m to the north of the construction compound for the existing National Grid Bolney substation extension, during the construction phase. Although the magnitude of change will be high, the sensitivity of this part of PRoW 1T is subdued by the presence of the existing National Grid Bolney substation. The significant effect will be limited to the construction period and decommissioning periods only and there will be no significant effects on this route during the operation and maintenance phases.
- 18.10.57 None of the other PRoW included in this assessment (PRoW 36Bo, 34Bo or 8T) will be significantly affected with most experienced Negligible-Zero magnitudes of change during the construction period, operation and maintenance and decommissioning phases.

Table 18-36 Existing National Grid Bolney Substation Extension (AIS and GIS options) – visual effects on views from Recreational routes

Recreational route: PRoW 1T and 36Bo between Wineham Lane and Coombe House

PRoW 1T extends east from Wineham Lane, past the Old Doctors and skirts the northern part of the existing National Grid Bolney substation, before joining up with PRoW Bo36 which is routed through woodland to Coombe House further east. It is located approximately 350m north-west of the existing National Grid Bolney substation extension. Views of the existing National Grid Bolney substation are prominent from western parts of this route, which to some extent reduces its sensitivity at this point. The ZTV indicates very limited theoretical visibility from this route. The main area of visibility will be for approximately 350m of the route between east of Old Doctors and the northern edge of the woodland after which there will be no visibility as the routes of both footpaths travel through woodland and beyond well vegetated field boundary hedgerow towards Coombe House.

Effects during construction

Magnitude of change and significance of residual effects:

The temporary construction compound will be visible from this route for approximately 350m between east of Old Doctors and the woodland to the north, at between approximately 50-180m distance. Other machinery, vehicle movements and welfare facilities associated with the construction works will be visible within the compound and along the construction access, within the existing National Grid Bolney substation. Local task and vehicle lighting may be visible in poor light / weather conditions. These views of the construction works will be seen in the context of existing substation infrastructure, pylons and overhead lines already visible close to the route. The magnitude of change will range from **High** (for approximately 350m of PRoW 1T) to **Negligible-Zero** (remainder of the two routes affecting PRoW 1T and 36Bo). The effects on the views and visual amenity experienced by walkers will range from **Major (Significant)** (for

Recreational route: PRow 1T and 36Bo between Wineham Lane and Coombe House

approximately 350m of PRow 1T due to the temporary construction compound) to **Minor (Not Significant)** to **No View** (remainder of the route which includes both PRow 1T and 36Bo). The nature of these effects will be short-term, temporary, direct and adverse. There will be no visibility of the existing National Grid Bolney substation extension from this route.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

The temporary construction compound will be reinstated and the magnitude of change will reduce to **Negligible**. The existing National Grid substation extension will generally not be visible from any part of the route (PRow 1T and 36Bo combined) due to a combination of screening from intervening vegetation and infrastructure associated with the existing National Grid Bolney substation. The magnitude of change will therefore be **Negligible-Zero**. The visual effect will range from **Minor (Not Significant)** to **No View** for PRow 1T and 36Bo combined. The nature of these effects will be permanent, direct and neutral.

Magnitude of change and significance of residual effects: Year 5

As assessed in Year 1, the visibility of the existing National Grid Bolney substation extension will range from **Negligible** to **Zero** magnitude and the visual effect will range from **Minor (Not Significant)** to **No View** for PRow 1T and 36Bo combined assuming the maintenance of existing vegetation. The nature of these effects will be permanent, direct and neutral.

Magnitude of change and significance of residual effects: Year 10

The visibility of the existing National grid Bolney substation extension will continue to range from **Negligible** to **Zero** magnitude and the visual effect will range from **Minor (Not Significant)** to **No View** for PRow 1T and 36Bo combined assuming the maintenance of existing vegetation. The nature of these effects will be permanent, direct and neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Assuming the temporary construction compound is located in the same location as the temporary construction compound used during the construction period, there will be close range views (50-180m distance) of the decommissioning works from approximately 350m of the route of PRow 1T. The magnitude of change will range from **High** (for approximately 350m of PRow 1T) to **Negligible-Zero** (remainder of the routes of PRow 1T and 36Bo combined). The effects on the views and visual amenity experienced by walkers will range from **Major (Significant)** (for approximately 350m of PRow 1T due to the temporary construction compound) to **Minor (Not Significant)** to **No View** (remainder of the route which includes both PRow 1T and 36Bo). The nature of these effects will be short-term, temporary, direct and adverse.

Whole Proposed Development residual effects:

There will be localised significant whole Proposed Development residual effects (**Major** significance and **Significant**) on the views from a short section of this PRow as a result

Recreational route: PRoW 1T and 36Bo between Wineham Lane and Coombe House

of both the existing National Grid Bolney substation extension and the onshore cable corridor (during the construction phase only). The offshore elements of the Proposed Development will not be visible from this route.

Cumulative effects assessment:

The existing National Grid Bolney substation extension will be experienced cumulatively with energy related development including grid stability infrastructure to the north of the existing National Grid Bolney substation (ID 57 and application DM/21/4285), and battery storage and solar farm development to the south of Coombe House (ID 54, application DM/15/0644 and ID56, application DM/23/0769) viewed from different parts of the combined route of PRoW 1T and 36Bo. The combined cumulative effect will be **Major** and **Significant** as a result of this development and the construction period of the existing National Grid Bolney substation extension. The nature of these effects will be long-term, temporary cumulative, direct, and adverse.

Recreational route: PRoW 8T / 34Bo between Bob Lane and Coombe House

PRoW 8T extends from Bob Lane in the south to linear woodland to the north of the Rampion 1 substation. At this point it joins PRoW 34Bo and extends north-east to the east of Coombe House and on to the A272 in the north. It is located approximately 385m east of the existing National Grid Bolney substation extension. There are views of the upper parts of the existing Rampion 1 and the existing National Grid Bolney substations and associated pylons along much of this route. The ZTV indicates very limited theoretical visibility from south of Coombe House. Viewpoints SB1 ([Figure 18.15, Volume 3](#) of the ES (Document Reference: 6.3.18)) and SB6 are located on this route and illustrate little or no visibility.

Effects during construction

Magnitude of change and significance of residual effects:

There will be filtered views of very limited construction works associated with the building of the existing National Grid Bolney substation extension (AIS or GIS option) through gaps in the trees and hedgerows to the south of Coombe House (mainly in the winter), as illustrated in Viewpoint SB1 and SB6 ([Figure 18.15 and 18.17, Volume 3](#) of the ES (Document Reference: 6.3.18)). All existing vegetation visible in the middle distance will be retained during the construction phase and will provide visual containment and screening to the construction works. Local task lighting may be visible in poor light / weather conditions. These filtered views of the construction works will be similar to the existing substation infrastructure already visible as illustrated in Viewpoint SB1 and SB6 ([Figure 18.15 and 18.17, Volume 3](#) of the ES (Document Reference: 6.3.18)). During the summer, there will be very limited views of the construction works as all the vegetation will be in leaf restricting views to the south. The temporary construction compound will not be visible from this route. From the remainder of the route, there will be no visibility of the construction works due to the screening effect of successive layers of intervening vegetation (trees / hedgerows and woodland), even in the winter and the existing substation infrastructure. The magnitude of change affecting the combined routes of PRoW 8T and 34Bo will range from **Negligible-Zero** (reducing in the summer)

Recreational route: PRow 8T / 34Bo between Bob Lane and Coombe House

and the level of effect on the views and visual amenity of these routes will range from **Minor (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Effects during operation and maintenance

Magnitude of change and significance of residual effects: Year 1

There will be very limited views of the existing National Grid Bolney substation extension (GIS or AIS option) through gaps in the trees and hedgerows to the south of Coombe House (mainly in the winter), as illustrated in Viewpoint SB1 and SB6 (**Figure 18.15 and 18.17, Volume 3** of the ES (Document Reference: 6.3.18)). These limited and mostly screened views will be similar to the existing substation infrastructure already partly visible as illustrated in Viewpoint SB1 and SB6 (**Figure 18.15 and 18.17, Volume 3** of the ES (Document Reference: 6.3.18)). The magnitude of change affecting the combined routes of PRow 8T and 34Bo will range from **Negligible-Zero** (reducing in the summer) and the level of effect on the views and visual amenity of these routes will range from **Minor (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Magnitude of change and significance of residual effects: Year 5

By Year 5, the magnitude of change affecting the combined routes of PRow 8T and 34Bo will continue to range from **Negligible-Zero** (reducing in the summer) assuming the maintenance of existing vegetation. The level of effect on the views and visual amenity of these routes will range from **Minor (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Magnitude of change and significance of residual effects: Year 10

By Year 10, the magnitude of change affecting the combined routes of PRow 8T and 34Bo will continue to range from **Negligible-Zero** (reducing in the summer) assuming the maintenance of existing vegetation. The level of effect on the views and visual amenity of these routes will range from **Minor (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Effects during decommissioning

Magnitude of change and significance of residual effects:

Decommissioning works associated with the existing National Grid Bolney substation extension will be barely visible and similar to the construction period assuming the maintenance of existing vegetation. The magnitude of change will therefore be Negligible – Zero (all seasons) along these routes (PRow 8T and 34Bo). The level of effect on the views and visual amenity of these routes will range from **Minor (Not Significant)** to **No View**. The nature of these effects will be short-term, temporary, direct and neutral.

Whole Proposed Development residual effects:

There will be no significant whole Proposed Development residual effects (**Minor to No View and Not Significant**) on the views from a short section of these PRow as a result of both the onshore cable corridor (during the construction phase only) and the existing National Grid Bolney substation extension. The offshore elements of the Proposed Development will not be visible from this route.

Cumulative effects assessment:

Recreational route: PRow 8T / 34Bo between Bob Lane and Coombe House

The existing National Grid Bolney substation extension will be experienced cumulatively with energy related development including grid stability infrastructure to the north of the existing National Grid Bolney substation (ID 57 and application DM/21/4285), and battery storage and solar farm development to the south of Coombe House (ID 54, application DM/15/0644 and ID56, application DM/23/0769) viewed from different parts of the combined route of PRow 1T and 36Bo. The combined cumulative effect will be **Major** and **Significant** as a result of the other cumulative development and not the existing National Grid Bolney substation extension. The nature of these effects will be long-term, temporary cumulative, direct, and adverse.

Visual effects on views from recreational and tourist destinations

- 18.10.58 Wineham Lane Caravan Park is outwith the ZTV and will have no visibility of the existing National Grid Bolney substation extension (GIS and AIS options) including the associated construction compound, and therefore **No Effect**. There are no other recreational and tourist destinations within the Study Area.

18.11 Onshore cable corridor - Assessment of effects: Construction Phase

Introduction to landscape effects

- 18.11.1 An introduction to landscape effects is set out in **Section 18.9** for the assessment of the onshore substation at Oakendene. The same approach is taken for the assessment of the onshore cable corridor, the main difference being that it is a linear development, with the main effects occurring during the construction phase.
- 18.11.2 To re-cap, landscape effects are defined by the Landscape Institute in GLVIA 3, paragraphs 5.1 and 5.2 as follows.
- "An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern ... is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. ... The area of landscape that should be covered in assessing landscape effects should include the site itself and the full extent of the wider landscape around it which the proposed Development may influence in a significant manner."*
- 18.11.3 These effects are assessed by considering the landscape sensitivity (value and susceptibility) against the magnitude of change. The type of effect may also be described as short, medium or long-term, direct or indirect, cumulative and beneficial, neutral, or adverse.
- 18.11.4 Detailed assessment of the landscape effects of the onshore cable corridor is provided in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3) and a summary of the construction phase effects is provided here and in **Table 18-44**. The detailed assessment in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3)

reports on the residual landscape effects, which remain after all of the embedded environmental measures have been taken into account as outlined in **Section 18.7** and **Table 18-25**.

- 18.11.5 An assessment of the cumulative landscape effects, taking account of other developments, as set out in **Chapter 5: Approach to the EIA, Volume 2** (Document Reference: 6.2.5) has been summarised in **Section 18.14. Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3) includes an assessment of cumulative landscape effects taking account of both other development and whole Proposed Development effects for each receptor. The assessment accords with the methodology detailed in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1).
- 18.11.6 The LVIA Study Area (**Figure 18.1, Volume 3** of the ES (Document Reference: 6.3.18)) covers a large, linear area from the West Sussex coast, through West Sussex and the SDNP and crosses the districts of Arun, Horsham and Mid Sussex. For ease of reference, the onshore cable corridor has been divided into three sections:
- Part 1: Climping to SDNP;
 - Part 2: SDNP; and
 - Part 3: SDNP to Oakendene / Bolney.
- 18.11.7 The baseline landscape receptors for the onshore cable corridor include landscape character areas (LCAs) as defined in the landscape character assessments for Arun District, Horsham District, Mid Sussex District and the SDNP. Reference is also made to Natural England's National Landscape Character Areas and at a county level the West Sussex Landscape character assessment. The landscape assessment has also had regard to the Sussex Historic Landscape Classification (WSCC et al., 2010), and the Local distinctiveness study of West Sussex (WSCC, 2013) as well as a number of sources of information relating to the SDNP.
- 18.11.8 An inventory of the baseline landscape receptors is set out in **Section 18.6, Table 18-16** and includes the SDNP and a total of 19 LCAs (seven LCAs within Arun District, five LCAs within the SDNP, six LCAs within Horsham District, and one LCA within Mid Sussex District).
- 18.11.9 Whilst all of the LCAs and landscape designations that fall within the 2km LVIA Study Area have been considered for assessment, the ZTV, site visits, viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) and the PEIR (RED, 2021) have been used to provide a high-level assessment that has scoped out those receptors where significant effects are unlikely on the basis of limited ZTV coverage, viewpoint analysis and site visits as set out in **Table 18-16**. The High Weald AONB for example has been scoped out of the assessment because significant landscape effects are unlikely due to the intervening distance between the AONB and the onshore cable corridor and the limited intervisibility and ZTV coverage which is supported by site visits and viewpoint analysis.

- 18.11.10 The viewpoint analysis in **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) indicates that significant visual effects (during the construction phase) will extend up to 650m distance from the onshore cable corridor (including temporary construction compounds) although the majority of the effects will be limited to within one or two field boundaries or 300m.
- 18.11.11 The LCAs along the onshore cable corridor are illustrated in **Figures 18.5bi-iii, Volume 3** of the ES (Document Reference: 6.3.18) and the landscape designations for the SDNP and the High Weald AONB are illustrated in **Figures 18.6a-b, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.11.12 Effects on other designations such as Registered Parks and Gardens, Conservation Areas, and Nature Reserves are covered in **Chapter 25: Historic environment, Volume 2** (Document Reference: 6.2.25) and **Chapter 22: Terrestrial ecology and nature conservation, Volume 2** (Document Reference: 6.2.22) respectively.

Summary of landscape character effects during construction

- 18.11.13 In summary, all of the LCAs crossed by the onshore cable corridor (14 out of the 19 included in the assessment) will in part, be significantly affected, four of which are located within the SDNP:
- Part 1: Climping to SDNP:
 - ▶ 31: Climping Lower Coastal Plain;
 - ▶ 34: Middle Arun Valley Floor;
 - ▶ 35: Lower Arun Valley Floor;
 - ▶ 40: Lyminster-Angmering Coastal Plain; and
 - ▶ 41: Black Ditch Rife.
 - Part 2: SDNP:
 - ▶ R1: South Downs Upper Coastal Plain;
 - ▶ B4: Angmering and Clapham Wooded Estate Downland;
 - ▶ A3: Arun to Adur Open Downs;
 - ▶ J3: Arun to Adur Scarp Footslopes.
 - Part 3: SDNP to Oakendene / Bolney:
 - ▶ D1: Amberley to Steyning Farmlands;
 - ▶ F1: Pulborough, Chiltington & Thakeham Farmlands;
 - ▶ G1: Ashurst & Wiston Wooded Farmlands;
 - ▶ O3: Steyning & Henfield Brooks;
 - ▶ J3: Cowfold & Shermanbury Farmlands; and
 - ▶ LW1: Hickstead Low Weald.

- 18.11.14 Four of the LCAs are not significantly affected. They include the chalk escarpment at I3: Arun to Adur Down Scarp which will be crossed completely by trenchless crossing techniques; LCAs 38: Littlehampton Arun Valley Sides and E1: Parham & Storrington Wooded Farmlands and Heaths which are not crossed by the cable corridor; and SC1: South Coast Shoreline which precedes the landfall and commencement of the trenched installation of the cable corridor further inland.
- 18.11.15 None of the LCAs included in the assessment will be significantly affected overall.
- 18.11.16 The geographical extent of significant landscape effects is largely contained within approximately 250m of the onshore cable corridor due to the screening effects of successive layers of vegetation (existing trees, woodland and hedgerows). This increases to within approximately 350m of the onshore cable corridor within the more open Arun Valley Floor and Coastal Plain landscapes (LCAs 34, 35, and 40) within the southern (Part 1) section of the onshore cable corridor. A similar effect occurs within the northern (Part 3) section of the onshore cable corridor where it crosses the River Adur valley (LCA O3: Steyning & Henfield Brooks).
- 18.11.17 Within the SDNP, the geographical extent of these significant effects will also be largely restricted to approximately <250m of the onshore cable corridor due to the wooded and / or agrarian character of three of the LCAs (R1, B4 and J3) within the SDNP. An exception to this is the A3: Arun to Adur Open Downs LCA where significant effects will extend to within approximately 650m of the onshore cable corridor, particularly in relation to multiple elevated areas viewing along the linear onshore cable corridor.
- 18.11.18 The duration of these effects will be short term, occurring within the 3.5year onshore cable corridor construction phase. However, construction work along the onshore cable corridor will be carried out in discrete sections (with typically 600m – 1,000m of onshore cable corridor between cable route joint bays/pits) with progressive backfill and reinstatement commenced in as shortest timeframe as practical (embedded environmental measures C19 and C20, **Section 18.7, Table 18-25**). Once topsoil has been reinstated and the haul road removed the effects on landscape character would begin to resemble agricultural effects, particularly in areas of arable farming and the effects on landscape character would no longer be significant. In areas of livestock farming, the re-establishment of pasture would occur within the first growing seasons (within the overall construction period) and again, the effects on landscape character would no longer be significant.
- 18.11.19 Significant effects on individual landscape elements, removed as a result of the onshore cable corridor construction works are also reported and, in each case, new, replacement planting will be undertaken and maintained for 10 Years.
- 18.11.20 The nature of these residual effects will be both direct and indirect, adverse and in some cases cumulative with other whole Proposed Development effects and other development included in the cumulative assessment.

Summary landscape assessment: Part 1: Climbing to SDNP

- 18.11.21 Part 1 of the onshore cable corridor is characterised at a national level by the South Coastal Plain National Character Area (NCA) described by the Natural England website (Natural England, 2013) as:

“...flat, coastal landscape with an intricately indented shoreline lying between the dip slope of the South Downs and South Hampshire Lowlands and the waters of the English Channel, Solent and part of Southampton Water. The coastline includes several major inlets which have particularly distinctive local landscapes and intertidal habitats of international environmental importance for wildfowl and waders. Chichester Harbour Area of Outstanding Natural Beauty lies within the NCA and the foothills of the South Downs, along the northern boundary, fall within the South Downs National Park.

Some three per cent of the area is designated as a Site of Special Scientific Interest, and there are four Special Protection Areas, two Special Areas of Conservation and four Ramsar sites: Chichester and Langstone Harbour, Pagham Harbour, The Solent and Southampton Water and Portsmouth Harbour.”

- 18.11.22 Drawing from the detailed landscape character assessing in [Appendix 18.3: Landscape assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.3), Part 1 of the onshore cable corridor includes the coastline, the lower Arun valley and a diverse area of landscape between the A27 / SDNP and the northern edge of Littlehampton. The area as a whole is subject to change with pressure for development along the coastline between Littlehampton and Elmer evidenced by the other existing and proposed developments (the latter of which is included in the cumulative assessment). This includes development between the A259 and Ferry Road (ID62, Arun Local Plan ref. SD9) and at Horsemere Green (ID14, application CM/1/17/OUT), urban fringe development around the periphery of Littlehampton, and highway development involving the A27 and Lyminster bypasses (ID1, application TR010045 and ID59, application WSCC/049/18/LY) along with ribbon development associated within the road corridors of these routes. These pressures and evolving character reduce the landscape quality and sensitivity to some extent.
- 18.11.23 The Arun Landscape Study (Arun District Council, 2006, para. 5.2.2) however, recognises parts of this area because it *“Includes the only substantial area of undeveloped coastline, largely rural, within the floodplain and provides separation between Middleton-on-sea and Littlehampton.”*
- 18.11.24 The proximity to the coastline, the influence of the Arun valley, Arundel Castle, and in some areas the ‘detachment’ from larger settlements and proximity to the SDNP affords higher levels of landscape quality in terms of the areas local sense of place and representativeness. The area between and close to Polling and Angmering is an example of this and it is also closer to the SDNP.
- 18.11.25 Taking account of the value and susceptibility of the different landscapes along the cable corridor the landscape sensitivity of the LCAs, specific to the onshore cable corridor, ranges from Medium to Medium-low.
- 18.11.26 The magnitude of change affecting localised areas of these LCAs ranges from High to Low. There are nine areas of trenchless crossings under roads (including the A27), railway lines, and the River Arun, which will reduce the landscape effects and ensure the maximum retention of trees, woodland and hedges associated with these crossings.
- 18.11.27 All of the LCAs crossed by the onshore cable corridor will be significantly affected and the level of effect in all cases is **Moderate (Significant)** and affecting the landscape within the proposed DCO Order Limits and the immediate field unit,

within 250m-350m of the onshore cable corridor, associated trenchless crossing construction compounds and the Climping temporary construction compound. The duration of these effects is limited to the 3.5 year construction phase. This will be achieved through the division of the onshore cable corridor into discrete sections of construction work with progressive backfill and reinstatement (return of topsoil and/or re-establishment of pasture) being completed during the construction period.

18.11.28 A summary of the assessment is provided in **Table 18-44**. Significantly affected LCAs within this part of the cable corridor are:

- 31: Climping Lower Coastal Plain
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 250m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the containment of the effects within a small area of the LCA at the landfall. There will be no effects on landscape elements.
- 34: Middle Arun Valley Floor
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 350m of the onshore cable corridor and associated trenchless crossing construction compounds. A Medium-high magnitude of change is assessed due to the 'ground based' nature of this development and the scale and extent of the onshore cable corridor, which affects a larger proportion of this LCA, although it is partly contained between the urban edge of Littlehampton and the railway line.
 - ▶ There will be localised significant effects on two landscape elements, including one linear area of scrub (HS1002) and one hedge (H22) both notched to 14m within this 2.3km section of onshore cable corridor.
- 35: Lower Arun Valley Floor:
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 350m of the onshore cable corridor and associated trenchless crossing construction compounds. A localised high magnitude of change is assessed due to the Climping temporary construction compound. Elsewhere a Medium-high magnitude of change is assessed due to the 'ground based' nature of this development and the scale and extent of the onshore cable corridor, which affects a larger proportion of this LCA, although it is partly contained between the urban edge of Littlehampton and the railway line.
 - ▶ There will be localised non-significant effects on three landscape elements which are not key characteristics of the landscape, including two linear areas of scrub cleared to 30m (HS48 and HS49) the latter overlapping with a treelines (W52) and one treeline / hedge (W388 / H16) notched to 14m within this 2km section of onshore cable corridor.

- 40: Lyminster-Angmering Coastal Plain
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 350m of the onshore cable corridor and associated trenchless crossing construction compounds. A higher (Medium) sensitivity is accorded as this landscape is close to the SDNP although the western part will be affected by the Lyminster Bypass. A Medium-high magnitude of change is assessed due to the 'ground based' nature of this development and the scale and extent of the onshore cable corridor, which affects a larger proportion of this LCA, although it is partly contained within the A27 corridor in the north.
 - ▶ There will be localised significant effects on eight landscape elements, including six treelines / hedges (H601, H600, W9, H521, H527 / H529, and H531) and two areas of woodland (W37-41 cleared to 6m) and W49 notched to 6m) within this 4.2km section of onshore cable corridor.
- 41: Black Ditch Rife
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate field unit, within approximately 250m of the onshore cable corridor and associated trenchless crossing construction compounds. A Medium-high magnitude of change is assessed due to the 'ground based' nature of this development. There will be no significant effects on landscape elements.

- 18.11.29 In summary, there will be localised significant effects on up to 13 landscape elements (treelines, woodland, and hedges) within this 9km section of onshore cable corridor. However, from a landscape character perspective localised management of vegetation is not significant overall, given that hedges and treelines are by their nature subject to management practices such as trimming, thinning, pollarding, hedge-laying and coppicing and ultimately none of these localised adverse effects will result in the permanent loss of vegetation. Nor would they be sufficient to adversely affect landscape patterns or characteristics, although some will be assessed as significant in visual terms.
- 18.11.30 All of these elements will be subject to replanting as part of the **Outline LEMP** (Document Reference: 7.10). **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated.
- 18.11.31 Most of these effects on landscape character will be experienced cumulatively with other development, notably urban fringe development close to Littlehampton and highway development related to the Arundel Bypass and the Lyminster Bypass. Whole project effects include the visibility of the offshore elements of the Proposed Development from many of the coastal areas, reported in **Chapter 15: Seascape, landscape and visual impact assessment, Volume 2** (Document Reference: 6.2.15).

Summary landscape assessment: Part 2: SDNP

- 18.11.32 Part 2 of the onshore cable corridor is characterised at a national level by the South Downs NCA, which is described by the Natural England website (Natural England, 2013) as comprising:

“‘whale-backed’ spine of chalk stretching from the Hampshire Downs in the west to the coastal cliffs of Beachy Head in East Sussex; two per cent of the coastline between Eastbourne and Seaford is recognised as Heritage Coast. The majority of the area falls within the South Downs National Park, a recognition of its natural beauty and importance for access and recreation, and allowing for local decision making processes to manage this nationally important area. Some eight per cent of the NCA is classified as urban, comprising the coastal conurbation of Brighton and Hove in the east. The South Downs NCA is an extremely diverse and complex landscape with considerable local variation representing physical, historical and economic influences; much of it has been formed and maintained by human activity, in particular in agriculture and forestry.”

- 18.11.33 Drawing from the detailed landscape character assessing in [Appendix 18.3: Landscape assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.3), Part 2 of the onshore cable corridor is routed through the SDNP which includes a highly valued, rich and diverse range of LCAs. They include the parkland and ancient woodland sections of the R1: South Downs Upper Coastal Plain and B4: Angmering and Clapham Wooded Estate Downland, which positively contrast with the open rolling hills and ridges of the A3: Arun to Adur Open Downs and the ‘breathtaking’ views from the chalk escarpment (I3; Arun to Adur Downs Scarp) before culminating with the J3: Arun to Adur Scarp Footslopes, which run along the northern base of the main chalk escarpment in the SDNP.
- 18.11.34 All of these LCAs are assessed as of high sensitivity.
- 18.11.35 There are six areas of trenchless crossings under roads (including two under the A283), ancient woodland at Angmering Park and the main chalk escarpment at Sullington Hill which crosses the whole of the I3; Arun to Adur Downs Scarp LCA.
- 18.11.36 The magnitude of change affecting these LCAs ranges from High (within the A3: Arun to Adur Open Downs) to Medium-high for the remaining LCAs.
- 18.11.37 Four of the five LCAs crossed by the onshore cable corridor will be significantly affected:
- R1: South Downs Upper Coastal Plain:
 - ▶ The level of effect will be **Major (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 250m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the higher landscape sensitivity and the containment and screening of vegetation.
 - ▶ There will be localised significant effects on three landscape elements (one double treeline (W15 and W16) either side of the PRoW 2188 north of Hammerpot notched to 6m, and one treeline (W8) at PRoW 2190, notched to 14m) within this 1.2km section of onshore cable corridor.
 - B4: Angmering and Clapham Wooded Estate Downland:

- ▶ The level of effect will be **Major (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within 250m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the higher landscape sensitivity and the containment and screening of vegetation.
 - ▶ There will be localised significant effects on three landscape elements, including one area of woodland (W4 and W5) cleared to 23m on either side of PRoW 2208, and two hedges (H540 and H541) at Angmering Park notched to 14m, within this 2km section of onshore cable corridor.
 - A3: Arun to Adur Open Downs:
 - ▶ The level of effect will be **Major (Significant)** affecting the landscape within the proposed DCO Order Limits and up to approximately 650m from the onshore cable corridor and associated trenchless crossing temporary construction compounds due to the high sensitivity and open character of this landscape and the available views from hills. There are no main temporary construction compounds within the SDNP and the trenchless crossing construction compounds are located at the edges of this LCA,
 - ▶ There will be localised significant effects on up to eight landscape elements, including two treelines (W4, and W10), two treelines / hedges (W5 and H550-553) and (W6 and H589-590), and three hedges (H545-546, H548 and H549) all notched to 14m and contained within the in the Michelgrove area, within this 5km section of onshore cable corridor.
 - J3: Arun to Adur Scarp Footslopes:
 - ▶ The level of effect will be **Major (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 250m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the higher sensitivity and screening of successive layers of vegetation.
 - ▶ There will be localised significant effects on up to 19 landscape elements, including one area of woodland (W1364) cleared to 30m on either side of PRoW 2697 north of Rowdell, three treelines (W498 / HS559, W505, and W507 / H181 / HS561), one treeline / hedge (W494 and H158), and 14 hedges / scrub (H129, H135, H146a, H157 / HS5784, H161 H162/163, H165, H166, H168, and H179) all notched to 14m. The process of notching is illustrated in Graphic A-3, Annex A, **Outline Landscape and Ecology Management Plan [REP4-047]** within this 5km section of onshore cable corridor.
- 18.11.38 The duration of these effects is limited to the 3.5 year construction phase. This will be achieved through the division of the cable corridor into discrete sections of construction work with progressive backfill and reinstatement (return of topsoil and/or re-establishment of pasture) being completed during the construction period.
- 18.11.39 There will be localised significant effects on up to 33 landscape elements (treelines, woodland, and hedges) within this 13km section of onshore cable corridor. Some of these effects are grouped and will collectively affect the

landscape pattern in the Hammerpot / Wepham Wood, Michelgrove Park and The Pike / A283 areas for up to 10 Years as vegetation reinstates. The effects on character will not be significant in terms of landscape character given that hedges and treelines are by their nature subject to management practices such as trimming, thinning, pollarding, hedge-laying and coppicing and ultimately none of these localised adverse effects will result in the permanent loss of vegetation. Some, more isolated areas will see a long-term loss of mature woodland creating a 'break' or 'gap' in the vegetation and leading to a significant visual effect experienced from a particular PRow or road.

- 18.11.40 All of affected landscape elements will be subject to replanting as part of the **Outline LEMP** (Document Reference: 7.10). These landscape elements will be maintained for 10 Years. **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated.
- 18.11.41 There will be no cumulative effects with other development in the SDNP. Whole project effects include the visibility of the offshore elements of the Proposed Development from elevated areas within the SDNP as reported in **Chapter 15: Seascape, landscape and visual impact assessment, Volume 2** (Document Reference: 6.2.15).

Summary landscape assessment: Part 3: SDNP to Oakendene / Bolney

- 18.11.42 Part 3 of the onshore cable corridor is characterised at a national level by the Low Weald NCA which is described by the Natural England website (Natural England, 2013) as follows.

“The Low Weald NCA is a broad, low-lying clay vale which largely wraps around the northern, western and southern edges of the High Weald. It is predominantly agricultural, supporting mainly pastoral farming owing to heavy clay soils, with horticulture and some arable on lighter soils in the east, and has many densely wooded areas with a high proportion of ancient woodland. Around 9 per cent of it falls within the adjacent designated landscapes of the Surrey Hills, Kent Downs and High Weald Areas of Outstanding Natural Beauty and the South Downs National Park. Around 23 per cent of the area is identified as greenbelt land.”

- 18.11.43 Drawing from the detailed landscape character assessing in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3), Part 3 of the onshore cable corridor includes six rural landscapes to the north of the SDNP that would be significantly affected. Whilst there are distinctions between these LCAs, there are also similarities with four of the LCAs (D1: Amberley to Steyning Farmlands, F1: Pulborough, Chiltington & Thakeham Farmlands, G1: Ashurst & Wiston Wooded Farmlands and J3: Cowfold & Shermanbury Farmlands) described as 'farmlands' or 'wooded farmlands'. The J3: Cowfold & Shermanbury Farmlands LCA also shares some key characteristics with the adjoining LW1: Hickstead Low Weald LCA, which is located within the Mid Sussex District. The O3: Steyning & Henfield Brooks LCA has a stronger sense of distinct identity as it follows the upper part of the River Adur valley and tributaries and pasture fields tends to predominate.

- 18.11.44 Three of these LCAs are assessed as of Medium-low sensitivity (D1: Amberley to Steyning Farmlands, F1: Pulborough, Chiltington & Thakeham Farmlands and LW1: Hickstead Low Weald) due to an increased diversity of development which includes mineral works, roads and urban fringe development at Storrington quarries, and grid infrastructure in the north (LW1) near Bolney. Two of the LCAs (F1: Pulborough, Chiltington & Thakeham Farmlands and G1: Ashurst & Wiston Wooded Farmlands) are assessed as of Medium-high sensitivity due to their proximity and connectivity with the SDNP. The remaining areas are assessed as of Medium sensitivity (O3: Steyning & Henfield Brooks and J3: Cowfold & Shermanbury Farmlands).
- 18.11.45 There are 12 areas of trenchless crossings in Part 3 of the onshore cable corridor, passing under roads, water courses and ancient woodland at Spithandle Lane in the G1: Ashurst & Wiston Wooded Farmlands LCA.
- 18.11.46 Five of the six LCA's crossed by the onshore cable corridor will be significantly affected as follows:
- D1: Amberley to Steyning Farmlands:
 - ▶ The level of effect will be **Major (Significant)** affecting the landscape within the proposed DCO Order Limits within the immediate field unit, due to the use of the area as the Washington temporary construction compound and its partial containment by perimeter vegetation. There will be no significant effects on landscape elements.
 - ▶ There will be localised significant effects on one landscape element, a treeline (W489) which will be cleared / removed to 20m to allow for construction access (A-39).
 - F1: Pulborough, Chiltington & Thakeham Farmlands:
 - ▶ The level of effect will be **Major / Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 250m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the containment and screening of vegetation.
 - ▶ There will be localised significant effects on four landscape elements (one treeline (W514) and one hedge (H202) both notched to 14m, within this 500m section of onshore cable corridor. In addition treeline (W1074) and treeline / scrub (H197) are likely to be affected by visibility splay requirements.
 - G1: Ashurst & Wiston Wooded Farmlands:
 - ▶ The level of effect will be **Major / Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate field units, within 150m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the containment and screening of vegetation.
 - There will be localised significant effects on 23 landscape elements within this 4.5km section of onshore cable corridor. This includes This includes hedge H214 cleared to 30m; a further 14 hedges (H201a, H201, H210, H211, H219,

H220, H228, H230, H235, H237, H246 in two parts, H245, H247, H263, H266) and scrub (HS1394) all notched to 14m, and three treeline / hedges (comprising H229 / W479, W477, and H613) which will be cleared to 5m and 6m respectfully (to allow for access as noted above). Two treelines at Spithandle Lane (W17 and W18) will be cleared to 20m and woodland (W5792) will be cleared to 30m along track / bridleway between Spithandle Lane and the A283; and two treelines (H17 and W18) will be cleared to 20m. O3: Steyning & Henfield Brooks:

- ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 350m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the slightly more open character of this LCA in the River Adur valley.
- ▶ There will be localised significant effects on up to 20 landscape elements within this 5km section of onshore cable corridor. This includes one area of woodland (W475) cleared to 30m, one area of woodland and 2 hedges will be notched to 6m (W1002, H312 and H317) at Downs Link; one hedge (H269) cleared to 20m along the B2135 at access A-48; and 15 further hedges along the cable corridor all notched to 14m (H257 in two parts, H263, H271, H277, H295 in four parts, H297, H302, H308, H349, H358, H359, H363, H372, and H377 and H378 on either side the B2116).
- J3: Cowfold & Shermanbury Farmlands:
 - ▶ The level of effect will be **Major / Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate 1-2 field units, within approximately 150m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the screening of successive layers of vegetation.
 - ▶ Within this 6km section of onshore cable corridor there will be localised significant effects on a total of up to 40 landscape elements (including effects from construction access). This includes eight elements near Oakendene (H309, H380, H406 / W367, H505, H509, and H612 will be cleared to between 6-20m and a hedge along the A272 (H520b) to be permanently cleared to 100m to allow for the permanent access to the Oakendene substation.
 - ▶ At Crateman's Farm four landscape elements will be affected including an area of scrub (HS1388) which will be cleared to 30m along with the notching to 14m of two areas of treeline / scrub (W557a / HS558 / HS1389) and (HS1388c) and an area of scrub (HS1388a/b) notched to 6m.
 - ▶ At King's Lane a hedge to the south of the lane (H474) will be cleared to 30m and a hedge / scrub (W544 / HS1414) to the north will be cleared to 20m. In addition, hedges (H481 and H482) on either side of Kings Lane will need to accommodate the 6m wide haul road.
 - ▶ At Greentree Lane, near the A281, an area of woodland and scrub (W505 / HS456 / HS1381) will be cleared to 30m. This will have a localised High magnitude of change due to the loss of woodland.

- ▶ Three areas of scrub (HS5804, HS1383, HS1389) will be cleared to 30m to the north of the B2116 and Shermanbury.
 - ▶ Near Eastridge Farm woodland (W736) will be cleared to 20m and scrub (HS1392) will be cleared to 30m.
 - ▶ Along the cable corridor seven further treelines / hedges / scrub will be notched to 14m including (H514, H515, H516, H507 / W207, W678, W473 / HS835, and W472).
 - ▶ Along the cable corridor 12 further treelines / hedges / scrub will be notched to 14m including (H378 on the north side of the B2116, H383, H384, H424, H433, H464b, H475, H476, H497, HS655 and W110). In addition, a treeline / hedge (W367 / H422) near A281 at Woodbarn / Maryland will be notched to 6m.
- In addition, 547m hedgerows with trees (H511 and H512), associated scrub (HS 654) and approximately one field tree will be lost permanently within the footprint of the substation at Oakendene (see **Section 18.9**). LW1: Hickstead Low Weald:
 - ▶ The level of effect will be **Moderate (Significant)** affecting the landscape within the proposed DCO Order Limits and the immediate field units, within approximately 150m of the onshore cable corridor and associated trenchless crossing construction compounds, due to the screening of successive layers of vegetation.
 - ▶ There will be localised significant effects on up to three landscape elements within this 1km section of the onshore cable corridor. These include one hedge notched to 14m (H469), a hedge and overlapping linear woodland (W677 / W387) cleared to 20m and a further hedge (H456) notched to 6m to the north and northeast of the existing National Grid Bolney substation and overlapping with other proposed energy related development. In addition, further trees (W3712a and W3712c) will be lost permanently within the footprint of the existing National Grid Bolney substation extension (see **Section 18.10**).
- 18.11.47 The duration of these effects is limited to the 3.5 year construction phase. This will be achieved through the division of the cable corridor into discrete sections of construction work with progressive backfill and reinstatement (return of topsoil and/or re-establishment of pasture) being completed during the construction period.
- 18.11.48 There will be localised significant effects on up to 91 landscape elements (treelines, woodland, and hedges) within this 17km section of onshore cable corridor. These effects are dispersed along the onshore cable corridor and will not affect landscape characteristics or patterns or result in the permanent loss of vegetation (except in relation to the existing National Grid Bolney substation extension). Some, more isolated areas will see a long-term loss of mature trees / woodland creating a 'break' or 'gap' in the vegetation and leading to a significant visual effect experienced from a particular PRow or road.
- 18.11.49 All of affected landscape elements (not lost permanently to substation development) will be subject to replanting as part of the **Appendix C National**

Grid Bolney Substation Extension Indicative Landscape Plan and **Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) (embedded environmental measures C196, **Section 18.7, Table 18-25**) and the **Outline LEMP** (Document Reference: 7.10). These landscape elements will be maintained for 10 Years. **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated.

Introduction to visual effects

- 18.11.50 An introduction to visual effects is set out in **Section 18.9** for the assessment of the onshore substation at Oakendene. The same approach is taken for the assessment of the onshore cable corridor, noting that the main visual effects will occur during the construction phase.
- 18.11.51 To re-cap, visual effects are assessed by considering the sensitivity of the receptor (people in the landscape) and the magnitude of change that will affect the view or overall visual amenity. They are defined by the Landscape Institute and IEMA (2013) in GLVIA 3, paragraphs 6.2 as follows:
- "An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. The concern here is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements."*
- 18.11.52 The type of effect may also be described as temporary or permanent, short-term to long-term, direct or indirect, and beneficial, neutral, or adverse. The assessment methodology is set out in **Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4** of the ES (Document Reference: 6.4.18.1).
- 18.11.53 The residual visual effects assessed here are those effects remaining after all of the embedded environmental measures have been taken into account outlined in **Section 18.7** and **Table 18-25**.
- 18.11.54 The visual effects have been assessed during construction, operation and maintenance (Years 1, 5 and 10), as set out in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4) and include the following visual receptors (people).
- visual effects on views from settlements;
 - visual effects on views from transport routes;
 - visual effects on views from recreational routes; and
 - visual effects on views from recreational and tourist destinations.
- 18.11.55 A total of 64 visualisations of the onshore cable corridor, including sequential viewpoints for the South Downs Way, are illustrated in **Figures 18.19 to 18.88, Volume 3** of the ES (Document Reference: 6.3.18). Each of the viewpoints are assessed in a separate appendix (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)).

- 18.11.56 The viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2)) indicates that significant visual effects (during the construction phase) are likely to affect limited locations within approximately 650m distance from the onshore cable corridor (including temporary construction compounds, trenchless crossing construction compounds and construction access routes), as indicated by viewpoints A, B, B1, C1, F3, H, H1, H1a, H1c, H2a, H3a, H5a, H6a, H7b, H7d, H7h, J1, J4, K, K1, L, Q, T, W, LD1, LD2, LD4, NP3, NP5, WS1 and WS3. The majority of these views are largely within approximately 300m of the onshore cable corridor with significant views limited to within 1-2 field boundaries.
- 18.11.57 The assessment of cumulative visual effects of the onshore elements of the Proposed Development and whole Proposed Development effects have also been assessed and reported for each receptor in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4)
- 18.11.58 There will be significant combined cumulative effects at viewpoints B1 and Q as a result of the onshore cable corridor and other developments. Viewpoints A and B will also be cumulatively affected due to the additional cumulative effect of the onshore cable corridor only. None of the other viewpoints will experience significant cumulative effects.
- 18.11.59 With regards to Whole Proposed Development effects, there will be significant visual effects as a result of both the onshore and offshore elements of the Proposed Development at viewpoints A, H7d, H7h and LD2. Significant visual effects as a result of the offshore elements of the Proposed Development only will be experienced at viewpoints E, G, I, N, O and U.

Summary of visual effects during construction

- 18.11.60 The onshore cable corridor will typically be up to 40m wide, comprising perimeter stock fencing, open cut cable installation with internal haul road, associated construction machinery and soil storage as indicated in **Graphic 4.19, Chapter 4: The Proposed Development, Volume 2** (Document Reference: 6.2.4). The trenchless crossing construction compounds will be used for material / equipment storage, some welfare facilities, and trenchless crossing activities. In addition, the main construction compounds at Climping and Washington will contain cement bound sand batching plants to height of 20m. Local task and vehicle lighting may be visible in poor light / weather conditions.
- 18.11.61 The duration of these effects will be short term, occurring within the 3.5 year onshore cable corridor construction phase. The construction work along the onshore cable corridor will be carried out in discrete sections (with typically 600m – 1,000m of onshore cable corridor between cable route joint bays/pits) with progressive backfill and reinstatement commenced in as shortest timeframe as practical (embedded environmental measures C-19 to C-20, **Section 18.7, Table 18-25**).
- 18.11.62 The nature of these construction effects will be both direct and indirect, adverse and in some cases cumulative with other whole Proposed Development and other development included in the cumulative assessment.

Visual effects on views from settlements

- 18.11.63 Visual effects likely to be experienced from settlements include consideration of residential areas, the public realm and public open spaces within the settlement boundaries that will be frequented by people. A Residential Visual Amenity Assessment has been undertaken in respect of individual residential properties in [Appendix 18.5: Residential Visual Amenity Assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.5).
- 18.11.64 The sensitivity of each of these receptors (people) at settlements has been assessed as **High** through a combination of high susceptibility and high to medium value. Residents are assessed as of high susceptibility of residents in accordance with GLVIA 3, paragraph 6.33 (Landscape Institute and IEMA, 2013) and the methodology in [Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4](#) of the ES (Document Reference: 6.4.18.1). The value of the view is also likely to be regarded as high by the residents themselves, but the views from settlements in the study area vary between either being nationally designated as part of the South Downs National Park (SDNP) or not designated for their scenic value and accord a high or medium value in this respect. Routing of the onshore cable corridor has sought to avoid settlements and many of the settlements have a degree of perimeter screening from mature vegetation.
- 18.11.65 There will be no significant visual effects on the views and visual amenity experienced from within settlements (**Minor to No effect and Not Significant**) listed within the baseline (**Table 18-23**). The church at Wiston is separate from other settlement and views from the edge of the churchyard would be significantly affected (**Major and Significant**) see Viewpoint J1: [Figure 18.50, Volume 3](#) of the ES (Document Reference: 6.3.18).
- 18.11.66 A total of 22 individual residential properties or groups of residential properties, closest to the onshore cable corridor are included in the Residential Visual Amenity Assessment (RVAA) (see [Appendix 18.5: Residential Visual Amenity Assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.5).

Visual effects on views from transport routes

- 18.11.67 The views from transport routes will be experienced transiently by road users (mainly drivers and where appropriate cyclists and walkers) who will experience the onshore cable corridor as part of the changing sequence of views experienced from the road. Each of these transport routes were driven or travelled in both directions in order to assess the potential effects and each assessment has been assisted on-site with the use of sequential wirelines transects and ZTV maps.
- 18.11.68 The sensitivity of receptors on roads has been assessed as Medium and accords with GLVIA 3, paragraph 6.33 (Landscape Institute and IEMA, 2013) and the methodology in [Appendix 18.1: Landscape and visual impact assessment methodology, Volume 4](#) of the ES (Document Reference: 6.4.18.1). Exceptions include roads where walkers, horse riders and cyclists of higher sensitivity may be present and / or transport routes overlapped by recreational routes. The sensitivity of these transport routes therefore has been assessed as High.
- 18.11.69 Many of the main roads that fall within the onshore cable corridor are crossed by trenchless construction techniques that also act to retained roadside vegetation,

screening the main views of the onshore cable corridor from the road. Instances of significant visual effects from roads therefore are limited to locations which do not have trenchless crossing (B2116 and Kings Lane), or view temporary construction compounds (Church Lane and A283), or are routed alongside the onshore cable corridor in some places () and / or lack roadside screening. Other significant visual effects may result from construction accesses such as at Church Lane, Climping or along the A283.

18.11.70 In summary, short sections of 12 of the 20 transport routes assessed within the study area will experience significant visual effects during the construction phase. The temporary construction activity at these locations will be limited to the construction of that section of cable corridor and progressively restored as the construction activity moves along the cable corridor. The significantly affected views from transport routes include parts of:

- Ferry Road – **Moderate** and **Significant** <200m of (which is also overlapped by Sustrans NCR 2 and the South Coast Cycle Route).
- A259 – **Major / Moderate** and **Significant** <400m of the (which is also overlapped by Sustrans NCR 2 and the South Coast Cycle Route).
- Church Lane at Climping – **Major** to **Major / Moderate** and **Significant** <150m of (which is also overlapped by the South Coast Cycle Route).
- A284 Lyminster Road – **Major / Moderate** and **Significant** <250m of the south of Lyminster.
- Poling Street, north of Poling – **Major** to **Major / Moderate** to **Moderate** and **Significant** <200m of the.
- A283 (The Pike) east of Washington – **Major** to **Moderate** and **Significant** < 1.5km.
- B2116 between Partridge Green and Shermanbury – **Major / Moderate** to **Moderate** and **Significant** <500m. This road will be crossed via an open trench and roadside vegetation (hedges) will be notched to 14m, although the mature roadside trees will be retained.
- Approximately 25m of the A281 near Greentree Farm – **Moderate** to Minor and **Significant** for 25m;
- Kings Lane, off Kent Street – **Major** to **Major / Moderate** to **Moderate** and **Significant** <100m. This road will be crossed via an open trench and roadside vegetation (hedges) will be notched to 14m.
- Kent Street, near Oakendene – **Major** to **Major / Moderate** and **Significant** <250m.
- Wineham Lane, near the existing National Grid Bolney substation – **Major** to **Major / Moderate** and **Significant** <50m.
- Littlehampton / Ford / Arundel railway line – **Major / Moderate** to **Moderate** and **Significant** <1.5km.

- 18.11.71 Allowing for a future baseline that includes the Lyminster Bypass, significant visual effects will be experienced from approximately 650m of the new road to the east of Lyminster.

Visual effects on views from recreational routes

- 18.11.72 The visual assessment has considered the potential visual effects likely to be experienced by people (walkers / cyclists / horse riders / joggers / others) on recreational routes illustrated in **Figure 18.9, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.11.73 All of the recreational routes have been assessed as of **High** sensitivity on account of their High to Medium value as recreational routes, some routed through designated landscapes and the High susceptibility of the people using these recreational routes, mostly walkers and cyclists, whose attention will be focused on the landscape around them.
- 18.11.74 There are five long-distance recreational routes within the study area including the South Downs Way National Trail, Sustrans NCR 2 (partly overlapped with the locally promoted South Coast Cycle Route), Sustrans NCR 223 (overlapped with the locally promoted Downs Link), and two other locally promoted routes comprising the Arun Way and the Monarch's Way. The England Coast Path National Trail has been approved by the Secretary of State (SoS) but it is not yet formally open. PRow 829 (which also partly overlaps with the Arun Way) has been used as a proxy and is included in the assessment.
- 18.11.75 In summary, the views from relatively short sections of up to six routes (a number of which are overlapped) will be significantly affected by the onshore cable corridor during the construction phase as follows:
- National Trails:
 - ▶ South Downs Way – **Major to Moderate** and **Significant** Up to 1.5km of the route between Chantry Post and Barnsfarm Hill depending on the detailed route options; and
 - ▶ England Coast Path / Arun Way / PRow 829 – **Major / Moderate** and **Significant** <400m, see Viewpoint A: **Figure 18.19, Volume 3** of the ES (Document Reference: 6.3.18).
 - Sustrans NCRs:
 - ▶ Sustrans NCR 2 / South Coast Cycle Route - **Moderate** and **Significant** <200m of the route overlapping with Ferry Road and the A259 see **Table 1-13** and **Table 1-14** and a further 150m of the South Coast Cycle Route overlapping with Church Lane see **Table 1-15**; and
 - ▶ Sustrans NCR 223 / Downs Link - **Major to Moderate** and **Significant** <430m of the route.
 - Other locally promoted long distance routes:
 - ▶ Arun Way: significant effects overlap with those previously assessed for the England Coast Path and the South Coast Cycle Route, totalling <550m of the route.

- ▶ Monarch's Way: **Major / Moderate** and **Significant** <450m.
 - Open Access Land:
 - ▶ Barpham Hill –**Moderate** and **Significant**, see Viewpoint F1a: **Figure 18.28, Volume 3** of the ES (Document Reference: 6.3.18), and
 - ▶ Sullington Hill –**Major** and **Significant**, see Viewpoint NP5: **Figure 18.73, Volume 3** of the ES (Document Reference: 6.3.18).
- 18.11.76 There are a number of PRowS within the LVIA Study Area and 114 have been included in the assessment in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4). In summary, the views and visual amenity of relatively short sections of approximately 47 PRowS will be significantly affected by the onshore cable corridor during the construction phase and 24 of these are within the SDNP. A summary is provided in **Table 18-46**.

Visual effects on views from recreational and tourist destinations

- 18.11.77 The visual assessment has considered the potential visual effects likely to be experienced by people at recreational / visitor or tourist destinations or attractions, which are overlapped by the ZTV, within the Study Area. Each of these locations were visited and/or assessed with the use of ZTVs and wirelines from the closest publicly accessible location.
- 18.11.78 All of the destinations have been assessed as of **High** sensitivity on account of their High to Medium value as recreational and tourist destinations, some located within designated landscapes and the High susceptibility of the people visiting these destinations, whose attention would be focused on the landscape around them.
- 18.11.79 Significant visual effects will be experienced from the following four receptors:
- Littlehampton West Beach (Climping Beach) – **Major / Moderate** and **Significant**, see Viewpoint A: **Figure 18.19, Volume 3** of the ES (Document Reference: 6.3.18);
 - Climping Camp Site –**Major / Moderate** and **Significant**;
 - Climping Caravan Park –**Major / Moderate** and **Significant**, see Viewpoint B: **Figure 18.20, Volume 3** of the ES (Document Reference: 6.3.18);
 - Washington Recreation Ground; – **Minor to Moderate** and **Significant** due to the Washington temporary construction compound visible beyond trees in the winter months; and
 - Washington Caravan Park – **Major / Moderate to Moderate** and **Significant** due to the Washington temporary construction compound visible beyond trees in the winter months.

Summary of effects on the SDNP during construction

- 18.11.80 National Parks such as the SDNP are representative of the highest value and level of landscape protection within England and Wales and are landscapes that are of both national and international importance. The LVIA for the SDNP has had regard

to the statutory requirement to conserve the natural beauty, special qualities, setting and overall integrity of the national park as set out in *The National Parks and Access to the Countryside Act 1949* and *The Environment Act 1995*.

“Conserve and enhance the natural beauty, wildlife and cultural heritage [and] promote opportunities for the understanding and enjoyment of the special qualities of the National Parks by the Public.”

- 18.11.81 **Section 18.2** sets out further the national and local policy in relation to the SDNP.
- 18.11.82 The assessment of the SDNP draws on both the landscape and visual parts of the assessment and the detail set out in terms of the effects on landscape character and the SDNP in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3); the viewpoint analysis in **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) and the visual assessment in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4). In addition, the assessment also takes account of other aspects to assess some of the special landscape qualities of the SDNP (detailed in **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3), in particular:
- **Chapter 17: Socio-economics, Volume 2** (Document Reference: 6.2.17) due to the visual effects on recreational receptors and visitor attractions;
 - **Chapter 21: Noise and vibration, Volume 2** (Document Reference: 6.2.21) due to the inter-relationships between visual effects and noise on several visual receptors;
 - **Chapter 22: Terrestrial ecology and nature conservation, Volume 2** (Document Reference: 6.2.22) due to the inter-relationships between the landscape habitats and effects on landscape elements (including trees hedges and woodland) and visual effects on nature reserves which may also be visitor attractions;
 - **Chapter 23: Transport, Volume 2** (Document Reference: 6.2.23) due to the close association on recreational routes including Public Rights of Way; and
 - **Chapter 25: Historic environment, Volume 2** (Document Reference: 6.2.25) due to the inter-relationships between the landscape and visual effects on some heritage features which may also be landmarks and visitor attractions.
- 18.11.83 Further assessment of the SDNP special qualities and an overview of the statutory duties in relation to the South Downs National Park is provided in the **Deadline 4 Submission – 8.25.5 Applicant's Post Hearing Submission – Issue Specific Hearing 2 Further information on South Downs National Park [REP4-063]**.
- 18.11.84 The viewpoint analysis (**Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2) includes 31 viewpoints within the SDNP ranging between 22m to 11.9km distance. Of these 15 have been assessed as significant and a ‘threshold’ for the occurrence of significant visual effects has been assessed as approximately 650m distance from the onshore cable corridor. The significantly affected viewpoints are listed as follows:
- F3: PRoW 2173 North of Blackpatch Hill;

- H: Washington;
- H1: Junction of The Pike and A283, Washington;
- H5a: Footpath off Swillage Lane;
- H6a: Footpath south of Angmering Park Stud Farm;
- H7a: Michelgrove on Monarch's Way;
- H7b: Harrow Hill bridleway;
- H7d: Blackpatch Hill;
- H7h: Barnsfarm Hill, South Downs Way;
- J4: A283 at Lower Chancton Farm;
- LD1: PRoW 2173, south of Chanty Post;
- LD2: PRoW 2092, east of Chanty Post;
- LD4: PRoW 2208/2, south east of Harrow Hill;
- NP3: PRoW 2208, Selden Fields (Viewpoint: NP3, **Figure 18.71, Volume 3** of the ES (Document Reference: 6.3.18)); and
- NP5: PRoW 2282, East of Sullington Hill.

18.11.85 The assessment has drawn from both the landscape and visual assessments in order to assess the effects of the onshore elements of the Proposed Development on the SDNP designation, taking account of its setting, SLQs, and integrity. It has been concluded that the onshore cable corridor will have a significant effect on landscape character, views and visual amenity within the SDNP in addition to areas of landscape character, views and visual amenity within the setting of the SDNP beyond the park boundary. The geographical extent of these effects is often discrete and contained within one or two field boundaries (approximately 250m of the onshore cable corridor) due to the screening effects of existing trees, woodland and hedgerows. However, the effects can also extend to affect receptors within approximately 650m of the onshore cable corridor when viewed from hill tops and open areas within the A3: Arun to Adur Open Downs LCA for example.

18.11.86 In summary, there will be a significant landscape and visual effects during construction on the following receptors:

- Landscape Character:
 - ▶ R1: South Downs Upper Coastal Plain (<250m);
 - ▶ B4: Angmering and Clapham Wooded Estate Downland (<250m);
 - ▶ A3: Arun to Adur Open Downs(<650m); and
 - ▶ J3: Arun to Adur Scarp Footslopes(<250m).
- Landscape Elements:

- ▶ Localised significant effects on up to 33 landscape elements (treelines, woodland, and hedges) within this 13km section of onshore cable corridor. Some are grouped and will collectively affect the landscape pattern in the Hammerpot / Wepham Wood, Michelgrove Park and The Pike / A283 areas. The effects on character will not be significant in terms of landscape character given that hedges and treelines are by their nature subject to management practices such as trimming, thinning, pollarding, hedge-laying and coppicing and ultimately none of these localised adverse effects will result in the permanent loss of vegetation. Some, more isolated areas will see a long-term loss of mature woodland creating a 'break' or 'gap' in the vegetation and leading to a significant visual effect experienced from a particular PRoW or road as in the case of Kitpease Copse (W5 and W4 cleared to 23m).
- Visual Effects:
 - ▶ A283 (The Pike) east of Washington (1.5km of the route);
 - ▶ Washington Recreation Ground;
 - ▶ South Downs Way (between 600m to 1.5km of the route between Chantry Post and Barnsfarm Hill depending on the detailed route options);
 - ▶ Monarch's Way: approximately 450m; and
 - ▶ Short sections of up to 21 PRoW.
- Open Access Land:
 - ▶ Open Access Land: Barpham Hill; and
 - ▶ Open Access Land: Sullington Hill.
- Other neighbouring effects that may influence the wider SDNP setting:
 - ▶ LCA 40: Lyminster-Angmering Coastal Plain (<350m) south of the SDNP;
 - ▶ F1: Pulborough, Chiltington & Thakeham Farmlands (<250m) north of the SDNP; and
 - ▶ G1: Ashurst & Wiston Wooded Farmlands (<150m).
- PRoW that cross the SDNP boundary and associated views from visual receptors such as Washington Caravan Park and Wiston church that view into or out of the SDNP.

18.11.87 Drawing from this assessment it has also been concluded that two of the seven special qualities of the SDNP will be significantly affected during the construction period as follows:

- 1) "*Diverse, inspirational landscapes and breathtaking views*"; and
- 3) "*Tranquil and unspoilt places*".

18.11.88 The duration of these effects will be short term, occurring within the 3.5 year onshore cable corridor construction phase. However, as previously noted, construction work along the onshore cable corridor will be carried out in discrete sections, with typically 600m – 1,000m of onshore cable corridor between cable

route joint bays/pits (embedded environmental measures C-19 to C-20, **Section 18.7, Table 18-25**) ensuring that the construction effects on the SDNP will be limited to a much shorter period for each discrete section due to the progressive backfill and reinstatement of the onshore cable corridor as the works progress.

- 18.11.89 There would be no effect on the core areas South Downs International Dark Sky Reserve or 'dark skies' within the SDNP due to the implementation of embedded environmental measures within the **Commitments Register [REP4-057]** (C-22, C-66, and C-200). This conclusion was based on the fact that none of the Dark Skies Discovery Sites or core areas of the Dark Sky Reserve are located within the LVIA Study Area (see **Figure 15.12, Volume 3** of the ES **[APP-088]**). The nearest of these being located beyond 10km distance from the proposed DCO Order Limits. The cable corridor is however routed through the "E1a - 2km Buffer Zone & Intrinsic Rural Darkness" area and as such the recommendations of the SDNP Local Plan Policy SD8: Dark Night Skies have been followed through the commitment measures.
- 18.11.90 The nature of these effects during construction will be short term in duration and temporary in nature. Taking account of the reinstatement and replacement planting there will be no significant effects on either of these special qualities during the operational and maintenance phase.
- 18.11.1 The Applicant has engaged with the SDNPA and other affected stakeholders with regards the mitigation to conserve and enhance the SDNP as well as measures that the Applicant has committed to in order to seek to further the purposes, The Applicant has detailed these measures under each special quality and has provided the **Draft S106 Agreement [REP4-077]** at Deadline 4 that provides for projects that will include:
- Landscape and nature recovery projects;
 - improved accessibility and experience to compensate for temporary residual effects on the South Downs Way National Trail and associated rights of way network;
 - contribute towards opportunities for improved understanding and enjoyment of cultural heritage within the South Downs National Park arising from the effects of the Development on areas of archaeological significance; and
 - contribute towards the offsetting for the permanent adverse effects arising from the impacts of the offshore array on the setting of the SDNP.
- 18.11.2 While there is harm to SQ1 "Diverse, inspirational landscapes and breathtaking views" (during construction) and SQ3 "Tranquil and unspoilt places" (during construction), it is not the duty to avoid all harm and such harm does not translate to compromising the statutory purpose of the SDNP. The natural beauty, wildlife and cultural heritage that make up the affected areas and the wider SDNP will remain and opportunities will still be present for understanding and enjoyment by the public of the special qualities of the SDNP and the Applicant has sought to further these purposes as described.
- 18.11.3 Rampion 2 will not therefore undermine the statutory purpose of the SDNP or compromise the purposes of its designation and through the application of the mitigation hierarchy and compensation measures described above the Applicant

has brought forward the Proposed Development in a way which seeks to further the purposes of the SDNPA. Therefore, the Proposed Development accords with the requirements of the legal tests and the policy tests set out in the NPS in relation to the SDNP (as outlined in Section 1.3 within [Deadline 4 Submission – 8.25.5 Applicant's Post Hearing Submission – Issue Specific Hearing 2 Further information on South Downs National Park \[REP4-063\]](#)).

18.12 Onshore cable corridor - Assessment of effects: Operational and Maintenance Phase

Summary of landscape effects during operation and maintenance

- 18.12.1 An introduction to landscape effects is set out in **Section 18.10**. During the operation and maintenance phase, the cables will be buried underground and operational and maintenance activities, described in [Chapter 4: The Proposed Development, Volume 2](#) (Document Reference: 6.2.4) will not result in significant landscape effects. Rather, the landscape assessment has considered the possibility that residual effects arising from the construction phase and involving the loss and subsequent replanting / establishment of vegetation may result in significant landscape effects during Years 1, 5 and 10, post construction.
- 18.12.2 Detailed assessment of the landscape effects of the onshore cable corridor, during the operation and maintenance phase is provided in [Appendix 18.3: Landscape assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.3). This assessment reports on the residual landscape effects, which remain after all of the embedded environmental measures have been taken into account as outlined in **Section 18.7** and **Table 18-25** and examines the residual effects arising from the construction phase. A summary of the operation and maintenance phase effects is provided in this section.

Landscape effects: Year 1

- 18.12.3 By the end of the construction period, all areas of the onshore cable corridor, including temporary construction compounds at Climping and Washington, trenchless crossing construction compounds and construction accesses will have been reinstated. As a minimum, the onshore cable corridor fencing and haul road would be removed, topsoil reinstated and where required grass / pasture reinstated.
- 18.12.4 Year 1 of the operational and maintenance phase extends for one year post the completion of the 3.5 year construction phase. Once topsoil has been reinstated the effects on landscape character that are characterised by arable farming would begin to resemble agricultural practices and no longer be significant. In areas of livestock farming, the re-establishment of pasture would occur within the first growing seasons (within the overall construction period) and again, the effects on landscape character would no longer be significant. Traces of the onshore cable corridor may be evident in the fields as 'crop marks' where new pasture is establishing for example, although these will not significantly affect the landscape character (**Minor to No effect and Not Significant**).

- 18.12.5 Taking account of the reinstatement works to the onshore cable corridor at the end of the construction period, significant effects on individual landscape elements, affected as a result of the onshore cable corridor construction works will not result in significant effects on landscape character during the operation and maintenance period. This is because at Year 1 the onshore cable corridor will have been reinstated and any residual effects on the landscape elements will appear in isolation and will not be sufficient in number, density, pattern or distribution to sustain significant effects on landscape character. There will be no obvious 'linkage' between them due to the reinstatement of the onshore cable corridor.
- 18.12.6 It is however likely that localised and significant effects on particular landscape elements (trees, woodland and hedges) will be sustained through Year 1 reflecting the loss of mature trees, woodland and hedges that cannot be replaced in Year 1. These effects will be partly mitigated through the provision of new, replacement planting as part of the [Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan](#) and [Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan](#) within the **DAS** (Document Reference: 5.8) (embedded environmental measures C-196, **Section 18.7, Table 18-25**) and the **Outline LEMP**, (Document Reference: 7.10). These landscape elements will be maintained for 10 Years.
- 18.12.7 Many of the affected hedges will be 'notched to 14m' a process that would see the maximum extent of hedge retained between the cable trenches. **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated. Vegetation, including where possible existing trees will be retained between the onshore cable trenches, avoiding a continuous 'large gap' in the hedgerow and retaining as much vegetation as possible within the overall 40m working width of the onshore cable corridor. New plants will be planted in the first available planting season post reinstatement and by the end of Year 1. All of the plant species selected will be native plants selected to be suitable to the landscape character and the environmental and technical requirements of their location.
- 18.12.8 A summary of the replacement planting required along the onshore cable corridor is noted as follows:
- Part 1: Clipping to SDNP:
 - ▶ 34: Middle Arun Valley Floor: Replanted 14m of scrub (HS1002) and hedge (H22);
 - ▶ 35: Lower Arun Valley Floor: Replanted linear areas of scrub cleared to 30m (HS48 and HS49) and hedge (W388 / H16) notched to 14m.
 - ▶ 40: Lyminster-Angmering Coastal Plain: Replanted six treelines / hedges notched to 14m (H601, H600, W9, H521, H527 / H529, and H531) and two areas of woodland (W37-41 cleared to 6m and W49 notched to 6m).
 - Part 2: SDNP:
 - ▶ R1: South Downs Upper Coastal Plain: Replanted treeline (W15 and W16) either side of the PRoW 2188 north of Hammerpot notched to 6m, and one treeline (W8) at PRoW 2190, notched to 14m).

- ▶ B4: Angmering and Clapham Wooded Estate Downland: Replanted three landscape elements, including one area of woodland (W4 and W5) cleared to 23m on either side of PRow 2208, and two hedges (H540 and H541) at Angmering Park notched to 14m.
- ▶ A3: Arun to Adur Open Downs: Replanted eight landscape elements, including two treelines (W4, and W10), two treelines / hedges (W5 and H550-553) and (W6 and H589-590), and three hedges (H545-546, H548 and H549) all notched to 14m and contained within the in the Michelgrove area
- ▶ J3: Arun to Adur Scarp Footslopes: Replanted 19 landscape elements, including one area of woodland (W1364) cleared to 30m on either side of PRow 2697, three treelines (W498 / HS559, W505, and W507 / H181 / HS561), one treeline / hedge (W494 and H158), and 14 hedges (H129, H135, H146a, H157 / HS5784, H161 H162/163, H165, H166, H168, and H179) all notched to 14m.
- Part 3: SDNP to Oakendene / Bolney:
 - ▶ D1: Amberley to Steyning Farmlands: one treeline (W489) replanted to 20m.
 - ▶ F1: Pulborough, Chiltington & Thakeham Farmlands: Replanted four landscape elements (one treeline (W514) and one hedge (H202) both replanted to 14m, and treeline (W1074) and treeline / scrub (H197) likely to be affected by visibility splay requirements.
 - ▶ G1: Ashurst & Wiston Wooded Farmlands: 23 landscape elements replanted including 15 hedges (H201a, H201, H210, H211, H219, H220, H228, H230, H235, H237, H246 in two parts, H245, H247, H263, H266) and scrub (HS1394) and three treeline / hedges (comprising H229 / W479, W477, and H613) replanted to 5m-14m. Four treelines near Spithandle Lane including (W17 and W18) replanted to 20m and woodland (W5792) replanted to 30m and two treelines (H17 and W18) replanted to 20m..
 - ▶ O3: Steyning & Henfield Brooks: 20 landscape elements, including one area of woodland (W475) replanted to 30m, one area of woodland and 2 hedges replanted to 6m (W1002, H312 and H317) at Downs Link; one hedge (H269) along the B2135 at access A-48 replanted to 20m; and 15 further hedges along the cable corridor all replanted to 14m (H257 in two parts, H263, H271, H277, H295 in four parts, H297, H302, H308, H349, H358, H359, H363, H372, and H377 and H378 on either side the B2116). J3: Cowfold & Shermanbury Farmlands: 40 replanted landscape elements, this includes:
 - ▶ Seven near Oakendene (H309, H380, H406 / W367, H505, H509, and H612) replanted to between 6-20m.
 - ▶ Four treelines / scrub at Crateman's Farm replanted to between 6-30m (HS1388, W557a / HS558 / HS1389, HS1388c and HS1388a/b).
 - ▶ Near Kings Lane hedge / scrub (H474 replanted to 30m, W544 / HS1414) replanted to 20m, and H481 and H482 replanted to 6m.

- ▶ At Greentree Lane, near the A281, area of woodland and scrub (W505 / HS456 / HS1381) replanted to 30m.
- ▶ Three areas of scrub (HS5804, HS1383, HS1389) will be cleared to 30m to the north of the B2116 and Shermanbury.
- ▶ Near Eastridge Farm woodland (W736) replanted to 20m and scrub (HS1392) replanted to 30m.
- ▶ Along the cable corridor seven further treelines / hedges / scrub will be replanted to 14m including (H514, H515, H516, H507 / W207, W678, W473 / HS835, and W472).
- ▶ Along the cable corridor 12 further treelines / hedges / scrub will be replanted to 14m including (H378 on the north side of the B2116, H383, H384, H424, H433, H464b, H475, H476, H497, HS655 and W110. In addition, a treeline / hedge (W367 / H422) near A281 at Woodbarn / Maryland replanted to 6m.
- ▶
- ▶ LW1: Hickstead Low Weald: Replanted three landscape elements including one hedge (H469) replanted to 14m and linear woodland (W677 / W387) replanted 20m and a further hedge (H456) replanted to 6m to the north of the existing National Grid Bolney substation and overlapping with other proposed energy related development.

Landscape effects: Year 5

- 18.12.9 Year 5 of the operational and maintenance phase extends from the end of Year 1 and includes Years 2-5.
- 18.12.10 During Year 5 new areas of planting will be established and requiring little or less maintenance in comparison to Year 1. Hedge planting for example will resemble a young hedge, but unless the existing hedge is tightly clipped and managed to a low height of 1-2m there will be a notable difference between the character and appearance of the existing mature vegetation (including trees, woodland and hedges) and the newly established planting at Year 5. Although this would not lead to a significant effect on landscape character, a significant effect on particular landscape elements would remain in comparison to the baseline condition prior to the commencement of the construction works along the onshore cable corridor.
- 18.12.11 The treelines and hedges affected by the onshore cable corridor are landscape elements created and maintained by people and it is part of their nature that they are subject to periodic changes. Localised benefits of the new planting include the opening up of new views, improved age structure, species diversity, increased light and increased biodiversity.

Landscape effects during Year 10

- 18.12.12 Year 10 of the operational and maintenance phase extends from the end of Year 5 and includes Years 6-10.

- 18.12.13 During Year 10 all planting will be well established and able to continue to grow through to maturity, requiring only periodic, on-going management such as hedge trimming or woodland thinning. Difference in the character and appearance of the new hedge planting in comparison to the existing, mature hedges will be less noticeable. Although there will remain a noticeable difference between new tree planting and mature trees at Year 10 it is not considered that these differences will be significant with the new planting continuing to provide improved age structure, and species diversity.

Summary of visual effects during operation and maintenance

- 18.12.14 An introduction to visual effects is set out in **Section 18.10**. During the operation and maintenance phase, the cables will be buried underground and operational and maintenance activities, described in **Chapter 4: The Proposed Development, Volume 2** (Document Reference: 6.2.4) will not result in significant visual effects. Rather, the visual assessment has considered the possibility that residual effects arising from the construction phase involving the loss and subsequent replanting / establishment of vegetation may result in significant effects on views and visual amenity experienced by people in the landscape during Years 1, 5 and 10, post construction.
- 18.12.15 The viewpoint analysis in **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES [APP-170] for Year 1 of the operational and maintenance phase indicates three significant visual effects at viewpoints B1, H5a, H6a, H7a, K1, NP3, T, and W.
- 18.12.16 Detailed assessment of the visual effects of the onshore cable corridor, during the operation and maintenance phase is provided in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4). This assessment reports on the residual visual effects, which remain after all of the embedded environmental measures have been taken into account as outlined in **Section 18.7** and **Table 18-25** and examines the residual effects arising from the construction phase that will remain apparent during the operation and maintenance phase. The visual assessment reveals that there will be no significant effects experienced from settlements, Open Access Land or recreation/ tourist destinations during the operational and maintenance phase.

Visual effects: Year 1

- 18.12.17 By the end of the construction phase, all areas of the onshore cable corridor, including temporary construction compounds at Climping and Washington, trenchless crossing temporary construction compounds and temporary construction accesses will have been reinstated. As a minimum, the onshore cable corridor fencing and haul road would be removed, topsoil reinstated and where required grass / pasture reinstated.
- 18.12.18 Traces of the onshore cable corridor may be visible in the fields as ‘crop marks’ where new pasture is establishing for example, although these will not significantly affect the views or visual amenity (**Minor to No effect and Not Significant**). Loss of vegetation and in particular mature trees, woodland and hedges and its subsequent replanting will appear as noticeable changes to localised and mainly short-range views from PRow and minor roads that cross the route of the onshore

cable corridor. Significant visual effects at Year 1 will be limited significant visual effects on views from Church Lane, the A283 (The Pike), King's Lane, Kent Street, a short section of the Sustrans NCR 223 / Downs Link, Arun Way, Monarch's Way and short sections of 21 PRoW (9 of which are in the SDNP), usually in instances where the lost vegetation / replanting is adjacent to the PRoW.

- 18.12.19 These effects are detailed in **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4). They will be partly mitigated through the provision of new, replacement planting as part of the **Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan** and **Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan** within the **DAS** (Document Reference: 5.8) (embedded environmental measures C-196, **Section 18.7, Table 18-25**) and the **Outline LEMP** (Document Reference: 7.10). These landscape elements will be maintained for 10 Years.
- 18.12.20 Many of the affected hedges will be 'notched to 14m' a process that would see the maximum extent of hedge retained between the cable trenches. **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated. Vegetation, including where possible existing trees will be retained between the onshore cable trenches, avoiding a continuous 'large gap' in the hedgerow and retaining as much vegetation as possible within the overall 40m working width of the onshore cable corridor. New plants will be planted in the first available planting season post reinstatement and by the end of Year 1. All of the plant species selected will be native plants selected to be suitable to the landscape character and the environmental and technical requirements of their location.
- 18.12.21 Visual effects resulting from the loss of vegetation along the onshore cable corridor will tend to be less visible when experienced from A class roads, due to the speed of travel and tendency for high retained levels of roadside vegetation and from settlement and recreational / tourist destinations which are visually more remote from the onshore cable corridor. An exception is the A283 (The Pike) where replacement planting at nine hedges / treelines will be visible, infilling 'notches' and magnitude of change visible from the roadside will be significant (**Moderate**) because it will be seen sequentially from along the road.
- 18.12.22 Road users on eight other roads will be able to view the reinstatement planting along short sections of road as follows:
- Church Lane, visual effects will remain significant (**Moderate**) due to replacement planting (H10) at the former temporary construction compound access.
 - Although not significant, road users will be able to see replacement scrub planting (HS1) from Polling Street close to the roadside.
 - Spithandle Lane, west of the B2135 due to hedge removal, although there would be limited non-significant visibility of this (Minor / Negligible). Reinstatement of the new hedge planting will establish in 5 years.
 - B2135 just to the north of Ashurst due to the removal of a low hedge (H269) to allow for construction access A-48 (Minor / Negligible). Reinstatement of the visual amenity at the village entrance will involve the reinstatement of the access road and the new hedge planting which will establish in 5 years due to

the lower height of the existing hedge. Existing trees in the grass verge at the village entrance will be retained.

- B2116 - affecting the roadside hedges between Partridge Green and Shermanbury (not significant Moderate / Minor). Reinstatement of the visual amenity due to the growth of new hedge planting along the roadside is likely to take at least five years due to the maturity of the lost vegetation. The new planting will, however, be supplemented by the retention of mature trees and other vegetation retained within the notches between the four cable trenches.
- King's Lane, off Kent Street, affecting the roadside hedges on either side of the road. The visual effect will be significant (**Moderate** to Moderate / Minor). Reinstatement of the visual amenity due to the growth of new hedge planting along the roadside is likely to take at least five years due to the maturity of the lost vegetation. The new planting will, however, be supplemented by mature vegetation retained within the notched hedges between the four onshore cable trenches.
- Kent Street, due to hedge removal that will be visible from the roadside, beyond existing hedges the visual effect will be significant (**Moderate** to Moderate / Minor). Reinstatement of the visual amenity and new hedge planting will establish in 5 years due to the intervening distance and the limited visibility from the road that would view these effects obliquely.
- Wineham Lane, north of the existing National Grid Bolney substation due to the hedge removal that will be visible due to a post and rail roadside boundary (not significant Minor / Negligible). Reinstatement of the visual amenity and new hedge planting will establish in 5 years due to the intervening distance and the 'gappy' state of the existing hedge.

Visual effects: Year 5

- 18.12.23 Year 5 of the operational and maintenance phase extends from the end of Year 1 and includes Years 2-5.
- 18.12.24 During Year 5 new areas of planting will be established and requiring little or less maintenance in comparison to Year 1. There will however, be a notable difference between the existing mature vegetation (including trees, woodland and hedges) and the newly established planting at Year 5. These changes are most likely to be experienced by walkers, cyclists and horse riders on PRoWs that cross the route of the onshore cable corridor. Instances of significant visual effects on the views from PRoW at year 5 affect a short section of the Sustrans NCR 223 / Downs Link and 16 PRoW (out of approximately 114 PRoW or groups of PRoW), six of which are located within the SDNP. These effects are detailed in [Appendix 18.4: Visual assessment, Volume 4](#) of the ES (Document Reference: 6.4.18.4). They will be partly mitigated through the provision of new, replacement planting as part of the [Appendix C National Grid Bolney Substation Extension Indicative Landscape Plan](#) and [Appendix D Onshore Oakendene onshore substation Indicative Landscape Plan](#) within the [DAS](#) (Document Reference 5.8) (embedded environmental measures C-196, **Section 18.7, Table 18-25**) and the [Outline LEMP](#) (Document Reference: 7.10). These landscape elements will be maintained for 10 Years.

- 18.12.25 Visual effects resulting from the loss of vegetation visible along roads, including Church Lane, King's Lane, A283 The Pike and Kent Street will not be significant at Year 5 due to combinations of established mitigation planting and in the case of the A283 the speed of travel.

Visual effects during Year 10

- 18.12.26 Year 10 of the operational and maintenance phase extends from the end of Year 5 and includes Years 6-10.
- 18.12.27 During Year 10 all planting will be well established and able to continue to grow through to maturity, requiring only periodic, on-going management such as hedge trimming or woodland thinning. Difference in the character and appearance of the new hedge planting in comparison to the existing, mature hedges will be less noticeable. There will remain a noticeable difference between new tree planting and mature trees at Year 10. This will occur in at least three locations where woodland within the SDNP is cleared to 23m PRoW 2174/1 near Wepham Wood, PRoW 2208 near Hammerpot Copse, and cleared to 30m at PRoW 2697 north of Rowdell south of the A283, creating a long term 'gap' in the woodland profile. However, it is not considered that these differences will be significant (**Minor and Not Significant** visual effect) with the new planting continuing to provide improved age structure, and species diversity.

Summary of effects on the SDNP

- 18.12.28 There will be no residual effects on landscape character during the operational and maintenance phase. This is because the onshore cable corridor will have been reinstated and any residual effects on the landscape elements will appear in isolation and will not be sufficient in number, density, pattern or distribution to sustain significant effects on landscape character.
- 18.12.29 It is however likely that localised and significant effects on particular landscape elements (trees, woodland and hedges) will be sustained through Year 1 reflecting the loss of mature trees, woodland and hedges that cannot be replaced. These effects will be partly mitigated through the provision of new, replacement planting as part of the **Outline LEMP**, (Document Reference: 7.10). These landscape elements will be maintained for 10 Years.
- 18.12.30 Many of the affected hedges will be 'notched to 14m' a process that would see the maximum extent of hedge retained between the cable trenches. **Annex A** of the **Outline LEMP** (Document Reference: 7.10) provides illustrative cross sections of how hedges and treelines notched to 14m for example will be reinstated. Vegetation, including where possible existing trees will be retained between the onshore cable trenches, avoiding a continuous 'large gap' in the hedgerow and retaining as much vegetation as possible within the overall 40m working width of the onshore cable corridor. New plants will be planted in the first available planting season post reinstatement and by the end of Year 1. All of the plant species selected will be native plants selected to be suitable to the landscape character and the environmental and technical requirements of their location.
- 18.12.31 In terms of visual effects, there will be however be some significant visual effects on views experienced from part of the A283 (The Pike) and up to seven short

sections of PRow persisting into the operational and maintenance phase as follows:

- A283 (The Pike) east of Washington due to the views from the road of successive hedges and treelines crossed by the onshore cable corridor during the construction period (**Moderate** and **Significant**). Reinstatement of the visual amenity when viewed obliquely from the road is likely to take at least five years and will be achieved by a combination of new hedge planting and mature vegetation retained within the notched hedges and treelines between the four cable trenches.
- PRow 2190 west of Hammerpot – 6m of hedge notching and scrub clearance;
- PRow 2188 north of Hammerpot - hedge / treeline notching to 6m and scrub clearance to 23m along wooded bridleway;
- PRow 2174/1 Wepham Wood - woodland clearance to 23m creating a long term 'gap' in the woodland profile and hedge notching to 14m;
- PRow 2208 near Hammerpot Copse – woodland clearance to 23m creating a long term 'gap' in the woodland profile and hedge notching to 14m along wooded bridleway;
- PRow 2208/1 near Michelgrove Park – multiple treeline / hedge notching to 14m visible from or alongside the route;
- PRow 2697 north of Rowdell south of the A283 - woodland clearance to 30m creating a long term 'gap' in the woodland profile; and
- PRow 2703 The Pike – multiple treeline / hedge notching to 14m as previously noted for the A283.

18.12.32 By Year 5 new areas of planting will be established and requiring little or less maintenance in comparison to Year 1. There will, however, be a notable difference between the existing mature vegetation (including trees, woodland and hedges) and the newly established planting at Year 5. Localised significant visual effects will persist to Year 5, affecting the views from short sections of six PRow within the SDNP (PRow 2190, 2188, 2208, 2208/1, 2697, and 2703). Visual effects resulting from the loss of vegetation along part of the A283, The Pike, will not be significant at Year 5 due to combinations of established mitigation planting and in the case of the A283 the speed of travel.

18.12.33 By Year 10 all planting will be well established and able to continue to grow through to maturity, requiring only periodic, on-going management such as hedge trimming or woodland thinning. The difference in the character and appearance of the new hedge planting in comparison to the existing, mature hedges will be less noticeable. There will remain a noticeable difference between new tree planting and mature trees at Year 10. This will occur in at least three locations where woodland within the SDNP is cleared to 23 along PRow 2174/1 near Wepham Wood, PRow 2208 near Hammerpot Copse, and cleared to 30m at PRow 2697 north of Rowdell south of the A283, creating a long term 'break' in the woodland profile. However, it is not considered that these differences will be significant (**Minor** and **Not Significant** visual effect) with the new planting continuing to provide improved age structure, open views and species diversity.

- 18.12.34 These effects would not adversely affect the special qualities of the SDNP, including the:
- 1) “Diverse, inspirational landscapes and breathtaking views”; and
 - 3) “Tranquil and unspoilt places”.
- 18.12.35 There would be no effect on the South Downs IDSR or ‘dark skies’ within the SDNP.
- 18.12.36 Taking account of the reinstatement and replacement planting there will be no significant effects on either of these special qualities during the operational and maintenance phase.
- 18.12.37 The Applicant has engaged with the SDNPA and other affected stakeholders with regards section 106 to provide a fund for compensation as noted previously and which will apply to the operational phase too.
- 18.12.38 As described previously, under ‘Summary of effects during construction’, Rampion 2 will not undermine the statutory purpose of the SDNP and through the application of the mitigation hierarchy and compensation measures will seek to further the purposes of the SDNPA.

18.13 Onshore cable corridor - Assessment of effects: Decommissioning Phase

- 18.13.1 The decommissioning phase of the onshore cable corridor is scoped out of the assessment as agreed at Scoping (Planning Inspectorate, 2020). This is due to the onshore cable being left *in-situ* post the operation and maintenance phase.

18.14 Assessment of cumulative effects

Approach

- 18.14.1 A cumulative effects assessment (CEA) examines the combined impacts of Rampion 2 in combination with other developments on the same single receptor or resource and the contribution of Rampion 2 to those impacts. The overall method followed in identifying and assessing potential cumulative effects in relation to the environment is set out in [Chapter 5: Approach to the EIA, Volume 2](#) (Document Reference: 6.2.5 and [Appendix 5.4: Cumulative effects assessment detailed onshore search and screening criteria, Volume 4](#) of the ES (Document Reference: 6.4.5.4).
- 18.14.2 The onshore screening approach follows the Planning Inspectorate’s Advice Note Seventeen (Planning Inspectorate, 2019) which is an accepted process for Nationally Significant Infrastructure Projects (NSIPs) and follows the four-stage approach set out in the guidance.

Cumulative effects assessment

- 18.14.3 For the cumulative landscape and visual impact assessment, a Zone of Influence (Zoi) has been applied for the CEA to ensure that the *additional* cumulative effects

as well as the *combined* cumulative effects of the onshore elements of the Proposed Development can be appropriately identified and assessed. The CEA also takes account of *sequential* cumulative effects resulting from a route through the landscape where the receptor may pass other development as well as onshore elements of the Proposed Development. The landscape and visual impact Zol is the same as the LVIA Study Area as illustrated in **Figure 18.1, Volume 3** of the ES (Document Reference: 6.3.18).

- 18.14.4 A short list of ‘other developments’ that may interact with the Rampion 2 Zols during their construction, operation or decommissioning so as to lead to a cumulative landscape or visual effect is presented in **Appendix 5.4: Cumulative effects assessment shortlisted developments, Volume 4** of the ES (Document Reference: 6.4.5.4) and on **Figure 5.4.2 and 5.4.4 in Appendix 5.4: Cumulative effects assessment detailed onshore search and screening criteria, Volume 4** of the ES (Document Reference: 6.4.5.4). This list has been generated applying criteria set out in **Chapter 5: Approach to the EIA, Volume 2** (Document Reference: 6.2.5) and **Appendix 5.4: Cumulative effects assessment detailed onshore search criteria, Volume 4** of the ES (Document Reference: 6.4.5.4) and has been collated up to the finalisation of the ES through desk study, consultation and engagement.
- 18.14.5 Only those ‘other developments’ in the short list that fall within the landscape and visual impact Zol have the potential to result in cumulative effects with the onshore elements of the Proposed Development on landscape and visual impact. All ‘other developments’ falling outside the landscape and visual impact Zol are excluded from this assessment. In addition, the following other developments have been scoped out:
- development contained within or beyond existing built-up areas such that it would be screened and/or would not substantially alter landscape character or visual amenity: ID 15, 17, 18, 19, 20, 21, 23, 25, 27, 28, 30, 31, 33, 35, 36, 38, 41, 47, and 48;
 - development that is already substantially part of the existing landscape character and where new development would continue that baseline. For example, further mineral works at an existing quarry (e.g., Rock Common Quarry and Sandgate Park Quarry) or further urban development within an existing housing or mixed use site as at Court Wick Park, Littlehampton. ID32, 39, and 42; and
 - the Lyminster Bypass is currently under construction and is due to be completed by 2024. As such it has been included in the assessment as part of the future baseline.
- 18.14.6 A tiered approach to the CEA has been set out in **Table 5-6 in Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5) and can be summarised as follows:
- Tier 1: developments under construction, permitted applications, and submitted applications;
 - Tier 2: Other developments on the Planning Inspectorate Programme of Projects where a Scoping Report has been submitted; and

- Tier 3: Other developments on the Planning Inspectorate Programme of Projects where a Scoping Report has not been submitted, or where developments are identified in Development Plans or other plans as appropriate.

18.14.7 On the basis of the above the following specific other developments contained within the short list in **Appendix 5.4: Cumulative effects assessment shortlisted developments, Volume 4** of the ES (Document Reference: 6.4.5.4) are considered in this CEA, as discussed **Table 18-37**.

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Table 18-37 Developments considered as part of the landscape and visual impact CEA

ID ³	Development type	Development name	Application reference	Status	Confidence in assessment	Tier ⁴	Distance to Rampion 2 (m)
1	Highways A new dual carriageway bypass	A27 Arundel Bypass	TR010045	Pre-application: Scoping Opinion published 14/04/2010	Medium	2	892
13 / 14 / 63	Mixed Use 300 dwellings and ancillary infrastructure	Land at Climping Arun Local Plan (2018) Reference Site SD10 Policy H SP2c	CM/48/21/RES / CM/1/17/OUT / Local Plan site (SD10)	Application pending a decision: submitted 31/08/2021 / Application approved (after appeal) 28/09/2018 / Allocated in Local Plan	High	1	Within proposed DCO Order Limits

³ ID reference as stated in Table 2-1 in **Appendix 5.4: Cumulative effects assessment shortlisted developments, Volume 4** of the ES (Document Reference: 6.4.5.4) and on **Figure 5.4.2 to 5.4.4, Volume 4** of the ES (Document Reference: 6.4.5.4).

⁴ **Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5) sets out the full definitions of the tiers.

ID ³	Development type	Development name	Application reference	Status	Confidence in assessment	Tier ⁴	Distance to Rampion 2 (m)
34 / 62	Residential 84 dwellings and supporting infrastructure	Land at Dappers Lane / Arun Local Plan site SD9	A/76/20/PL / Arun Local Plan - reference site SD9: Angmering North (Policy H SP2c)	Application approved 09/02/2021	High	1	551
50	Energy storage Battery Energy Storage Facility	Battery Energy Storage System at Coombe Farm #3	DM/22/3228	Negative screening decision (EIA not required): decision 18/11/2022	Low	3	293
51	Energy storage Proposed energy storage system and associated equipment	Ghyll Farm	DM/20/2554	Negative screening decision (EIA not required): decision 06/08/2020	Low	3	Within proposed DCO Order Limits
53	Energy storage Battery Energy Storage Facility	Battery Energy Storage System at Coombe Farm	DM/21/1668	EIA Not Required 25/05/2021	Low	3	Within proposed DCO Order Limits
54	Energy generation (solar)	Land at Coombe Farm	DM/15/0644	Application approved 17/02/2017	High	1	21

ID ³	Development type	Development name	Application reference	Status	Confidence in assessment	Tier ⁴	Distance to Rampion 2 (m)
	Solarvoltaic panels and associated infrastructure						
56	Energy storage Battery Energy Storage Facility	Battery Energy Storage System at Coombe Farm #4	DM/23/0769	Application pending a decision: submitted 20/03/2023	High	1	Within proposed DCO Order Limits
57	Utilities infrastructure (energy) Grid stability infrastructure	Grid Stability Infrastructure at the existing National Grid Bolney Substation	DM/21/4285	Negative screening decision (EIA not required): decision 14/01/2022	Low	3	Within proposed DCO Order Limits
59	Highways Creation of a 1.1km highway, with shared cycleway and footway	Lyminster Bypass	WSCC/049/18/LY	Application approved 09/05/2019	High	1	Within proposed DCO Order Limits

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18.14.8 The cumulative Project Design Envelope or type of effect and scope of the cumulative LVIA is described in **Table 18-38**.

Table 18-38 Cumulative Project Design Envelope for landscape and visual impact

Project phase and activity/impact	Scenario	Justification
Combined cumulative landscape or visual effect occurring during construction or operation.	All Tier 1 and 3 projects identified in Table 18-37 .	Proposed Development extends, intensifies or fills and area in combination with other development to substantially alter landscape character or visual amenity. The combined effects are greater than each development individually or incrementally.
	All Tier 1 and 3 projects identified in Table 18-37 .	Temporal effects where cumulative development or phases of development may occur simultaneously or successively.
	All Tier 1 and 3 projects identified in Table 18-37 .	Cumulative effects that result from the removal of vegetation to reveal views of other development, altering the landscape character and visual amenity.
Additional cumulative landscape or visual effect occurring during construction or operation.	All Tier 1 and 3 projects identified in Table 18-37 .	The additional effect of the onshore elements of the proposed Development, in addition to other development substantially alter landscape character or visual amenity.
Sequential cumulative landscape or visual effect occurring during construction or operation.	All Tier 1 and 3 projects identified in Table 18-37 .	Development is experienced sequentially from a route in combination with other development to substantially alter landscape character or visual amenity.

- 18.14.9 The CEA for landscape and visual impact is set out in **Table 18-39**. Furthermore, detailed cumulative assessment is contained in **Appendix 18.2: Viewpoint analysis, Volume 4** of the ES (Document Reference: 6.4.18.2), **Appendix 18.3: Landscape assessment, Volume 4** of the ES (Document Reference: 6.4.18.3), and **Appendix 18.4: Visual assessment, Volume 4** of the ES (Document Reference: 6.4.18.4).

Table 18-39 Cumulative effects assessment for landscape and visual impact

ID ⁵	Development name	Application reference	Assessment discussion	Environmental measures
1	A27 Arundel Bypass	TR010045	<p>During construction: The A27 Arundel Bypass is remote from the onshore elements of the Proposed Development and lacks intervisibility. It may be experienced simultaneously in the views from Arundel Castle or sequentially, travelling along the A27 or the Lyminster Bypass and the A284, Lyminster Road. Cumulative effects (additional and combined) that could result from the onshore elements of the construction phase would be Minor to Negligible and therefore would not result in a significant cumulative effect.</p> <p>During operation: Cumulative effects resulting from the onshore elements of the Proposed Development would be Negligible to No Effect and therefore would not result in a significant cumulative effect.</p>	All measures listed in Table 18-25 , notably C-1, C-5, C-7, C-18, C-19, C-115, C-196, C-199, and C-220.
13 / 14 / 34 /	Residential: Land at Climping – Arun Local Plan ref.SD10, Policy H SP2c Land West of	CM/48/21/RES / CM/1/17/OUT / Local Plan site	<p>During construction: Residential development and the onshore elements of the Proposed Development will extend and intensify effects on landscape character in the Lower Arun Valley and Coastal</p>	All measures listed in Table 18-25 , notably C-1, C-5, C-7,

⁵ ID reference as stated in Table 2-1 in [Appendix 5.4: Cumulative effects assessment shortlisted developments, Volume 4](#) of the ES (Document Reference: 6.4.5.4) and on [Figure 5.4.2 to 5.4.4, Volume 4](#) of the ES (Document Reference: 6.4.5.4).

ID ⁵	Development name	Application reference	Assessment discussion	Environmental measures
62 / 63	Church Lane & South of Horsemere Green Lane, Climping. Land at Dappers Lane / Arun Local Plan site SD9	(SD10) / A/76/20/PL / Arun Local Plan - reference site SD9: Angmering North (Policy H SP2c)	<p>Plain, increasing its 'urbanisation'. Subject to phasing, the onshore elements of the Proposed Development could lead to simultaneous and or successive cumulative development that infills and connects areas of developed landscape and visual change across the Lower Arun Valley and Coastal Plain, limited to the construction period.</p> <p>Road users will experience sequential cumulative effects of development on the A259 and Ferry Road. On Church Lane, A259 and Ferry Road, any loss of roadside trees could open up gaps to reveal further development altering the view and the perceived landscape character.</p> <p>Cumulative effects (additional and combined) resulting from the onshore elements of the Proposed Development would range from Major to Moderate and would result in a significant cumulative effect.</p> <p>During operation: Cumulative effects resulting from the onshore elements of the Proposed Development during its operation would be Negligible to No Effect and therefore would not result in a significant cumulative effect.</p>	C-18, C-19, C-115, C-196, C-199, and C-220.
50	Battery Energy Storage System at Coombe Farm #3	DM/22/3228	<p>During construction: Energy development in combination with other cumulative development (ID 50, 51, 52, 54, 56, and 57) and the onshore elements of the Proposed Development will extend and intensify effects on landscape character in the Eastern Low</p>	All measures listed in Table 18-25 , notably C-1, C-5, C-7, C-18, C-19,
51	Energy (storage): Ghyll Farm	DM/20/2554		

ID ⁵	Development name	Application reference	Assessment discussion	Environmental measures
52	Battery Energy Storage System at Coombe Farm #2	DM/22/0807	Weald around the existing National Grid Bolney substation. Subject to phasing, the onshore elements of the Proposed Development could lead to successive and / or simultaneous development, limited to the construction period.	C-115, C-196, C-199, C-220, and C-254.
54	Energy (solar): Land at Coombe Farm	DM/15/0644	Road users on Bob Lane and Bolney Chapel Road will experience sequential cumulative effects. Loss of vegetation along Wineham lane or PRow could open up gaps to reveal further development altering the view and the perceived landscape character.	
56	Battery Energy Storage System at Coombe Farm #4	DM/23/0769	Cumulative effects (additional and combined) resulting from the onshore elements of the Proposed Development would range from Major to Moderate and would result in a significant cumulative effect.	
57	Grid Stability Infrastructure at Bolney Substation	DM/21/4285	<p>During operation:</p> <p>Cumulative effects resulting from the onshore elements of the Proposed Development would be Minor to Negligible and therefore would not result in a significant cumulative effect. This is because they are positioned 'centrally and within' landscape that is already affected by the National Grid Bolney substation with other development located closer to visual receptors viewing from the perimeter of this area.</p>	
59	Lyminster Bypass	WSCC/049/18/LY	<p>During construction:</p> <p>The Lyminster Bypass will be completed by 2024 and is included in the assessment as part of the future baseline. It will cross the onshore cable corridor at right angles and there will be simultaneous views from the Lyminster Bypass and</p>	

ID ⁵	Development name	Application reference	Assessment discussion	Environmental measures
			<p>other existing receptors on the eastern edge of Lyminster. Sequential cumulative effects would be experienced from receptors on the bypass, Lyminster Road, the A27 and PRow. Cumulative effects (additional and combined) resulting from the construction phase of the onshore elements of the Proposed Development would range from Major to Moderate would result in a significant cumulative effect which would affect the landscape character and receptors on the bypass, Lyminster Road, and PRow local to this area. Views from the A27 are unlikely to be significantly affected due to the greater intervening distance and vegetation screening.</p> <p>During operation: Cumulative effects resulting from the onshore elements of the Proposed Development during its operation would be Negligible to No Effect and therefore would not result in a significant cumulative effect.</p>	

18.15 Transboundary effects

- 18.15.1 Transboundary effects arise when impacts from a development within one European Economic Area (EEA) states affects the environment of another EEA state(s). A screening of transboundary effects has been carried out and is presented in Appendix B of the Scoping Report (RED, 2020). There are no transboundary effects upon other EEA states relevant to the landscape and visual impact assessment, and therefore these are not considered any further as part of this chapter.

18.16 Inter-related effects

- 18.1.1 The inter-related effects assessment considers likely significant effects from multiple impacts and activities from the construction, operation and maintenance and decommissioning phases of Rampion 2 on the same receptor, or group of receptors.
- 18.16.1 Inter-related effects could potentially arise in one of two ways. The first type of inter-related effect is a Proposed Development lifetime effect, where multiple phases of the Proposed Development interact to create a potentially more significant effect on a receptor than in one phase alone. The phases for Rampion 2 are construction, operation and maintenance, and decommissioning. All Proposed Development lifetime effects are assessed in [Chapter 30: Inter-related effects, Volume 2](#) (Document Reference: 6.2.30).
- 18.16.2 The second type of inter-related effect is receptor-led effects. Receptor-led effects are where effects from different environmental aspects combine spatially and temporally on a receptor. These effects may be short-term, temporary, transient or longer-term. Full results of the receptor-led effects assessment can be found in [Chapter 30: Inter-related effects, Volume 2](#) of the ES (Document Reference: 6.2.30).

18.17 Summary of residual effects

- 18.17.1 **Table 18-40** to **Table 18-45** present a summary of the residual effects on landscape and visual impact receptors resulting from the onshore substation at Oakendene, the existing National Grid Bolney substation extension and the onshore cable corridor (including landfall, construction compounds and access).

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Table 18-40 Summary of landscape effects: onshore substation at Oakendene

Landscape Receptor	Sensitivity	Construction (4 Years)		Operation and maintenance			Decommissioning
		Magnitude of change	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10	Level of effect
Local Character Area (LCA)							
J3 Cowfold & Shermanbury Farmlands	Medium-high	Zero to High	Major (<300m)	Major (<300m)	Major to Major / Moderate (<300m)	Major / Moderate (<300m)	Major / Moderate to Moderate to Minor (<300m)
Landscape elements: (2No lines of hedgerow and trees and associated scrub)	Medium-high	High	Major	Major	Major to Major / Moderate	Major / Moderate	Major / Moderate to Moderate to Minor
M1 Crabtree & Nuthurst Ridges & Ghylls	Medium-high	Zero to Medium-low	Moderate / Minor	Minor	Minor	Minor	Minor
LW1 Hickstead Low Weald	Medium	Zero to Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible
Landscape Designations							
High Weald AONB	High	Zero	No Effect	No Effect	No Effect	No Effect	No Effect

*Note: Significant effects in shown in bold and extent of significant effect for linear receptors shown in brackets.

Table 18-41 Summary of visual effects: onshore substation at Oakendene

Visual Receptor	Sensitivity	Construction (4 Years)		Operation and maintenance			Decommissioning
		Magnitude of change	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10	Level of effect
Settlements							
Cowfold	High	Zero	No Effect	No Effect	No Effect	No Effect	No Effect
Transport Routes							
A272	Medium	Zero to High (300m)	Major / Moderate	Moderate	Moderate / Minor	Minor / Negligible	Minor / Negligible
A281	Medium	Zero	No Effect	No Effect	No Effect	No Effect	No Effect
Kent Street	High to Medium	Zero to High (1km)	Major to Moderate	Major / Moderate to Minor	Major / Moderate to Minor	Moderate / Minor to Minor / Negligible	Moderate / Minor to Minor / Negligible
Recreational Routes and tourist destinations							
PRoW 1786 and 1787	High	High to Medium	Major to Major / Moderate	Major to Major / Moderate	Major / Moderate to Moderate	Moderate to Minor	Moderate to Minor
PRoW 1788	High	High	Major	Moderate	Moderate	Moderate to Minor	Minor
PRoW 1775 - 1777	High	Zero	No Effect	No Effect	No Effect	No Effect	No Effect

Visual Receptor	Sensitivity	Construction (4 Years)		Operation and maintenance			Decommissioning
		Magnitude of change	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10	Level of effect
Wineham Lane Caravan Park	High	Zero	No Effect	No Effect	No Effect	No Effect	No Effect

Table 18-42 Summary of landscape effects: extension at the existing National Grid Bolney substation

Visual Receptor	Sensitivity	Construction (4 Years)		Operation and maintenance			Decommissioning
		Magnitude of change	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10	Level of effect
Local Character Area (LCA)							
<u>LW1 Hickstead Low Weald</u>	Low	Zero to Medium	Minor	Minor	Negligible	Negligible	Minor to Negligible

*Note: Significant effects in shown in **bold** and extent of significant effect for linear receptors shown in brackets.

Table 18-43 Summary of visual effects: extension at the existing National Grid Bolney substation

Visual Receptor	Sensitivity	Construction (4 Years)		Operation and maintenance			Decommissioning
		Magnitude of change	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of Effect Year 10	Level of effect
Transport Routes							
Bob Lane	High to Medium	Low	Minor (200m)	Minor (200m)	Minor to Minor / Negligible	Minor / Negligible	Minor / Negligible
Wineham Lane	High to Medium	Zero	No Effect	No Effect	No Effect	No Effect	No Effect
Recreational Routes and tourist destinations							
PRoW 1T / 36Bo	High	High	Major (350m)	Minor	Minor	Minor	Major to Minor
PRoW 8T / 34Bo	High	Negligible	Minor - No View	Minor - No View	Minor - No View	Minor - No View	Minor - No View
Wineham Lane Caravan Park	High	Zero	No Effect	No Effect	No Effect	No Effect	No Effect

Table 18-44 Summary of landscape effects: onshore cable corridor

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Landscape character areas: Part 1 – Climping to South Downs National Park (SDNP)						
SC1: South Coast Shoreline	Medium	Zero	No Effect	No Effect	No Effect	No Effect
Landscape elements	N/A – No trees / woodland / hedges directly affected.					
31: Climping Lower Coastal Plain	Medium-low	Medium-high	Moderate (<250m)	Negligible	No Effect	No Effect
Landscape elements: (Trees / hedgerow on Church Lane)	Medium	Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
34: Middle Arun Valley Floor	Medium-low	Medium-high	Moderate (<350m)	Negligible	No Effect	No Effect
Landscape elements: (4No. areas of scrub and 1No. hedge notched to 14m)	Medium-low	Medium	Moderate / Minor	Minor / Negligible	No Effect	No Effect
35: Lower Arun Valley Floor	Medium-low	Medium-high	Moderate (<350m)	Negligible	No Effect	No Effect

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Landscape elements: (3No. scrub cleared to 30m and hedge notched to 14m)	Medium-low	Medium-high	Moderate	Minor	Minor / Negligible	No Effect
38: Littlehampton Arun Valley Sides	Low	Low	Negligible	No Effect	No Effect	No Effect
Landscape elements:	No trees / woodland / hedges directly affected.					
40: Lyminster-Angmering Coastal Plain	Medium	Medium-high	Moderate (<350m)	Moderate / Minor	Minor	No Effect
Landscape elements: (6No. treelines / hedges notched to 6-14m and 2No. woods cleared / notched to 6m and an areas of scrub cleared to 20m)	Medium-high	Medium	Moderate	Moderate	Moderate / Minor	Minor
41: Black Ditch Rife	Medium-low	Medium-high	Moderate (<250m)	Negligible	No Effect	No Effect
Landscape elements:	Medium-low	Low	Minor / Negligible	Minor / Negligible	No Effect	No Effect

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Landscape character areas: Part 2 – SDNP						
R1: South Downs Upper Coastal Plain	High	Medium-high	Major (<250m)	Moderate	Minor	No Effect
Landscape elements: (Double treeline / notched to 6m and 2No treeline / hedges notched to 14m)	Medium-high	Medium-high	Major / Moderate	Moderate	Moderate / Minor	Minor
B4: Angmering and Clapham Wooded Estate Downland	High	Medium-high	Major (<250m)	Moderate	Minor	No Effect
Landscape elements: (Double woodland cleared to 23m and 3No.hedges notched to 14m)	High	Medium-high	Major	Major / Moderate	Moderate	Minor
A3: Arun to Adur Open Downs	High	High	Major (<650m)	Minor	No Effect	No Effect
Landscape elements: (8No. treelines /	Medium-high	Medium-high	Major / Moderate	Moderate	Minor	No Effect

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
hedges / scrub notched to 14m)						
I3: Arun to Adur Downs Scarp	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Landscape elements: N/A – No trees / woodland / hedges directly affected.						
J3: Arun to Adur Scarp Footslopes	High	Medium-high	Major (<250m)	Moderate	Minor	No Effect
Landscape elements: (1No. woodland cleared to 30m and 19No. treelines / hedges notched to 14m)	High	Medium-high	Major	Major	Moderate	Minor
Landscape character areas: Part 3 – SDNP to Oakendene / Bolney						
D1: Amberley to Steyning Farmlands	Medium-low	High	Moderate	No Effect	No Effect	No Effect
Landscape elements: (treeline / scrub cleared to 20m)	Medium-high	Medium-high	Major	Moderate	Moderate / Minor	Minor

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
E1: Parham & Storrington Wooded Farmlands & Heaths	Medium-low	Negligible-Zero	Negligible	No Effect	No Effect	No Effect
Landscape elements:	N/A – No trees / woodland / hedges directly affected.					
F1: Pulborough, Chiltington & Thakeham Farmlands	Medium-high	Medium-high	Major / Moderate (<250m)	No Effect	No Effect	No Effect
Landscape elements: (2No. treelines and 1No. hedge cleared 15m / notched to 14m)	Medium-high	Medium-high	Major / Moderate	Moderate	Moderate / Minor	Minor
G1: Ashurst & Wiston Wooded Farmlands	Medium-high	Medium-high	Major / Moderate (<150m)	Moderate / Minor	Minor	No Effect
Landscape elements: (3No. treelines / woodland cleared to 20 - 30m; and 20No. treelines / hedges / scrub notched to 14m)	Medium-high	Medium-high	Major / Moderate	Moderate	Moderate	Minor

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
O3: Steyning & Henfield Brooks	Medium	Medium-high	Moderate (<350m)	Moderate / Minor	Minor / Negligible	No Effect
Landscape elements: (20No. including 1No. wood cleared to 30m 1No. hedge cleared to 20m and 18No. treelines / hedges notched to 6-14m)	Medium-high	Medium-high	Major / Moderate	Major / Moderate	Moderate	Minor
J3: Cowfold & Shermanbury Farmlands	Medium	Medium-high	Moderate (<250m)	Moderate / Minor	Minor / Negligible	No Effect
Landscape elements: (40No. including areas of woodland / treeline / hedge and scrub clearance and notching of hedges / treelines scrub to 14m and 6m)	Medium-high	High to Medium-high	Major to Major / Moderate	Major / Moderate	Moderate	Minor
LW1: Hickstead Low Weald	Medium-low	Medium-high	Moderate (<150m)	Minor	Minor / Negligible	No Effect

Landscape Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude	Level of effect	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Landscape elements: (1No. wood / hedge cleared to 20m and 2No. treelines / hedges notched 6 to 14m)	Medium-high	Medium-high	Major / Moderate	Moderate	Moderate	Minor

*Note: Significant effects in shown in bold and extent of significant effect for linear receptors shown in brackets.

Table 18-45 Summary of visual effects: onshore cable corridor

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Settlements						
Climping and Atherington	High	Low to Negligible-Zero	Moderate to Minor	No Effect	No Effect	No Effect
Littlehampton	High	Low to Negligible-Zero	Moderate to Minor	No Effect	No Effect	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Lyminster	High	Low to Negligible-Zero	Moderate to Minor	No Effect	No Effect	No Effect
Poling	High	Low to Negligible-Zero	Moderate to Minor	No Effect	No Effect	No Effect
Washington	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Wiston	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Ashurst	High	Low to Negligible-Zero	Moderate to Minor	No Effect	No Effect	No Effect
Partridge Green	High	Zero	No effect	No Effect	No Effect	No Effect
Shermanbury	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Wineham	High	Zero	No effect	No Effect	No Effect	No Effect
Transport routes						
Climping Street	High to Medium	Negligible-Zero	Minor to Minor / Negligible	No Effect	No Effect	No Effect
A259	High	Medium to Negligible-Zero	Major / Moderate (<400m)	Minor / Negligible	No Effect	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Ferry Road (Sustrans NCR 2 / South Coast Cycle Route)	High	Medium-low	Moderate (<200m)	Minor	No Effect	No Effect
Church Lane	High	High	Major to Major / Moderate (<150m)	Moderate	Moderate	Minor
Ford Road	Medium	Negligible-Zero	Minor / Negligible	No Effect	No Effect	No Effect
Railway: Littlehampton / Arundel / Ford	Medium	High to Medium-high	Major / Moderate to Moderate (<1.5km)	No Effect	No Effect	No Effect
A284 Lyminster Road	Medium	High to Medium-high	Major / Moderate (<250m)	Moderate / Minor No Effect	Minor / Negligible No Effect	No Effect
(Future baseline: Lyminster Bypass)	Medium	High to Medium	Major / Moderate to Moderate (<650m)			No Effect
Polling Street	High to Medium	High	Major to Major / Moderate to Moderate (<200m)	Minor	No Effect	No Effect
A27	Medium	Medium-low	Moderate / Minor	Minor	Minor / Negligible	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
A24	Medium	Negligible-Zero	Minor / Negligible	No Effect	No Effect	No Effect
A283 (The Pike)	Medium-high	High to Medium	Major to Moderate (<1.5km)	Moderate	Moderate / Minor to Minor	No Effect
Water Lane	High to Medium	Negligible-Zero	Minor / Negligible	No Effect	No Effect	No Effect
Spithandle Lane	High to Medium	Low to Negligible-Zero	Moderate / Minor to Minor / Negligible	Minor / Negligible	No Effect	No Effect
B2135	Medium	Low to Negligible-Zero	Minor to Minor / Negligible	Minor / Negligible	No Effect	No Effect
B2116	Medium	High	Major / Moderate to Moderate (<500m)	Moderate / Minor	Minor / Negligible	No Effect
A281	Medium	Medium to Negligible-Zero	Moderate to Minor / Negligible	Moderate / Minor	Minor	Minor / Negligible
A272 (excluding Oakendene substation)	Medium	Negligible-Zero	Minor / Negligible	No Effect	No Effect	No Effect
Kings Lane	High to Medium	High	Major to Major / Moderate (<100m)	Moderate to Moderate / Minor	Minor to Minor / Negligible	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Kent Street	High to Medium	High	Major to Major / Moderate (<1.5km)	Moderate to Moderate / Minor	Minor to Minor / Negligible	No Effect
Wineham Lane	High to Medium	High	Major to Major / Moderate (<50m)	Minor to Minor / Negligible	Minor to Minor / Negligible	No Effect
Bob Lane	High to Medium	Zero	No Effect	No Effect	No Effect	No Effect
Recreational Routes						
South Downs Way	High	High	Major to Moderate (<600m to 1.5km)	No Effect	No Effect	No Effect
England Coast Path / Arun Way / PRow 829	High	Medium	Major / Moderate (<400m)	No Effect	No Effect	No Effect
Sustrans NCR 2 / South Coast Cycle Route (See also Ferry Road and Church Lane)	High	Medium-low	Moderate (<200m)	Minor	No Effect	No Effect
Sustrans NCR 2 / South Coast Cycle Route – see assessment for transport route Ferry Road						

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Sustrans NCR 223 / Downs Link	High	High	Major to Moderate (<430m)	Moderate	Minor	No Effect
Arun Way	High	High	Major to Moderate (<550m)	No Effect	No Effect	No Effect
Monarch's Way	High	High	Major (<450m)	Moderate	Moderate to Minor	Minor
Open Access Land						
Atherington	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Barpham Hill	High	Low	Moderate	Minor	Minor	No Effect
Patching Hill	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
OAL 1	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Sullington Hill	High	High	Major	Minor	Minor	No Effect
Chantry Hill	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Washington Common	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Chanctonbury Hill	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Horsebridge Common	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Bine's Green	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Recreational and Tourist Destinations						
Littlehampton Golf Club	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Littlehampton West Beach (Climping Beach)	High	Medium	Major / Moderate	No Effect	No Effect	No Effect
Littlehampton East Beach	High	Zero	No Effect	No Effect	No Effect	No Effect
Climping Camp Site	High	Medium	Major / Moderate	No Effect	No Effect	No Effect
Climping Caravan Park	High	Medium	Major / Moderate	No Effect	No Effect	No Effect
Brookside Caravan Park	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Arundel Castle	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect

Visual Receptor	Sensitivity	Construction phase (3.5 Years)		Operation and maintenance phase		
		Magnitude of change	Level of effect*	Level of effect Year 1	Level of effect Year 5	Level of effect Year 10
Chanctonbury Ring	High	Negligible-Zero	Minor	No Effect	No Effect	No Effect
Washington Recreation Ground / Allotments	High	Medium-low	Minor to Moderate	No Effect	No Effect	No Effect
Washington Caravan Park	High	Medium-high to Medium	Major / Moderate to Moderate	No Effect	No Effect	No Effect

Table 18-46 Summary of Public Rights of Way (PRoW) and Open Access Land along the Onshore cable corridor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
Part 1: Climbing to South Downs National Park (SDNP)					
Arun Way / England Coastal Path National Trail (part)	Major / Moderate (400m)	3.5 Years (Landfall construction compound)	No Effect	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 829 and Open Access Land					
PRoW 174	Major to Major / Moderate (500m of route)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 173	Major to Major / Moderate (400m of route)	3.5 Years (Landfall construction compound)	Minor to None	N/A	N/A
PRoW 197	Major / Moderate (1km)	3.5 Years (Landfall construction compound)	No Effect	N/A	N/A
PRoW 172	Major / Moderate to Moderate (500m)	3.5 Years (Landfall construction compound)	No Effect	N/A	N/A
Arun Way (part) PRoW 169	Moderate (400m)	3.5 Years (Landfall construction compound)	No Effect	N/A	N/A
PRoW 168	Major to Major / Moderate (1.2km)	3.5 Years (Climping construction compound)	Moderate	Minor to None	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
Arun Way (part) PRoW 3110	Moderate to Minor (600m)	3.5 Years (Landfall construction compound)	No Effect	N/A	N/A
PRoW 206	Major to Major / Moderate (1km of route)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 206 and 200/5	Moderate to Minor	Progressive reinstatement	No Effect	N/A	N/A
PRoW 2165	Major (170m)	Progressive reinstatement	Moderate	Minor	N/A
PRoW 2163/1	Major (400m)	Progressive reinstatement	Minor	Minor to None	Minor
PRoW 2207	Minor	N/A	No Effect	N/A	N/A
PRoW 2163	Major to Major / Moderate (1km)	Progressive reinstatement	Minor to None	Minor to None	N/A
PRoW 2202/1	Major to Major / Moderate (1km)	Progressive reinstatement	Minor to None	Minor to None	Minor
PRoW 3096	Minor	N/A	No Effect	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2200	Major to Major / Moderate (600m)	Progressive reinstatement	Minor to None	Minor to None	N/A
PRoW 2201	Minor	N/A	No Effect	N/A	N/A
PRoW 2199	Major to Major / Moderate (250m)	Progressive reinstatement	Minor	Minor to None	Minor
PRoW 2198	Major (25m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2176	Major to Major / Moderate (230m)	Progressive reinstatement	Moderate	Moderate	Minor
Part 2: SDNP					
PRoW 2190	Major to Major / Moderate (420m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2188	Major (100m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2187 and 2787/1	Major to Major / Moderate (450m)	Progressive reinstatement	Moderate	Moderate	Minor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2186	Moderate (200m)	Progressive reinstatement	Minor	Minor	No effect
PRoW 2208	Major (100m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2174/1	Major (100m) and Major / Moderate (150m)	Progressive reinstatement	Major / Moderate	Minor	Minor
Monarch's Way (part) PRoW 2175, 2211, 2180/1, 2185 and 2210	Michelgrove Park: Moderate	Progressive reinstatement	Minor	Minor	No effect
PRoW 2208/1	Major (100m)	Progressive reinstatement	Major / Moderate	Moderate	Minor
PRoW 2260 and Open Access Land (OAL 1)	Major / Moderate (600m)	Progressive reinstatement	Moderate	Moderate	Minor
Monarch's Way (part) PRoW 2208,	Minor	Permanent change adding passing	No Effect	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
2208/1, 2174 and 2263		places to access to Michelgrove Park.			
Monarch's Way (part) PRoW 2264 and 2091	Moderate to Minor	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2262 and 2260/1	Major / Moderate (1.2km)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2208/2	Moderate (800m)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2209	Major to Major / Moderate (800m)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2173	Major to Major / Moderate (1km)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2282/1	Major (1.2km)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2092	Major to Major / Moderate (800m)	Progressive reinstatement	Minor to None	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2260	Moderate (1.4km)	Progressive reinstatement	Minor to None	N/A	N/A
PRoW 2693 and 2673 (Byway) – see South Downs Way assessment in Section 1-4.					
PRoW 2108/1, 2689 and 2282 and Open Access Land at Sullington Hill (OAL 2)	Major to Major / Moderate (1km)	Progressive reinstatement	Moderate	Moderate to Minor	Minor
PRoW 2671/1, 2684 and 2683	Minor (1.3km)	N/A	No Effect	N/A	N/A
PRoW 2686	Minor (500m)	N/A	No Effect	N/A	N/A
PRoW 2691	Minor (1.2km)	N/A	No Effect	N/A	N/A
PRoW 2665	Major to Major / Moderate (750m)	Progressive reinstatement	Moderate	Moderate to Minor	Minor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2697	Major (<150m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2666	Moderate to Minor (550m)	Progressive reinstatement	Minor	Minor	Minor
PRoW 2698 and 3181	Minor	N/A	No Effect	N/A	N/A
PRoW 2623 and Open Access Land	Minor	N/A	No Effect	N/A	N/A
PRoW 2699	Minor	N/A	No Effect	N/A	N/A
PRoW 2703	Major to Major / Moderate (180m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2089/2	Minor	Progressive reinstatement	No Effect	N/A	N/A
Part 3: SDNP to Oakendene / Bolney					
PRoW 2710	Major to Major / Moderate (375m)	Progressive reinstatement	Moderate	Moderate	Minor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2709	Major (150m)	N/A	Moderate	Moderate	Minor
PRoW 2617, 2616 and 2614	Minor to No effect	N/A	No Effect	N/A	N/A
PRoW 2711	Major (230m)	Progressive reinstatement	Major	Moderate	Minor
PRoW 2514	Major (180m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2594	Major / Moderate (460m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2589/1	Major (400m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2587	Minor	N/A	No Effect	N/A	N/A
Horsebridge Common (Open Access Land)	Minor	N/A	No Effect	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2588	Minor	Progressive reinstatement	No Effect	N/A	N/A
PRoW 2583/2	Minor	N/A	No Effect	N/A	N/A
PRoW 2519	Major / Moderate to Moderate (1km)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2520	Major / Moderate to Moderate (300m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 3200	Minor	N/A	No Effect	N/A	N/A
PRoW 2525, 3517, 2530 and 2531	Minor	N/A	No Effect	N/A	N/A
PRoW 2372	Minor	N/A	No Effect	N/A	N/A
PRoW 2372	Moderate (250m)	Progressive reinstatement	Moderate	Moderate	Minor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 2372/1, 2372 and 2372/2	Minor	N/A	No Effect	N/A	N/A
PRoW 2374	Major (400m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2808	Major / Moderate (10m)	N/A	No Effect	N/A	N/A
PRoW 1841	Major / Moderate (830m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 2800	Major / Moderate (150m)	N/A	No Effect	N/A	N/A
PRoW 1774	Major (150m)	Progressive reinstatement	Minor	Minor	Minor
PRoW 1781	Major / Moderate (830m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 1776/1	Major / Moderate (150m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 1782	Major / Moderate (150m)	Progressive reinstatement	Moderate	Moderate	Minor

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 1783 and 1784	Major / Moderate (150m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 1730	Major / Moderate (80m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 1787	Major to Major / Moderate (175m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 1789 (East)	Minor	N/A	No Effect	N/A	N/A
PRoW 1789 (West)	Major to Major / Moderate (150m)	Progressive reinstatement	Major / Moderate	Moderate	Minor
PRoW 1775 and 1777	Minor	N/A	No Effect	N/A	N/A
PRoW 1788	Minor	N/A	No Effect	N/A	N/A
PRoW 1786	Moderate (400m)	N/A	No Effect	N/A	N/A
PRoW 36Bo	Minor	N/A	No Effect	N/A	N/A

PRoW No.	Construction Effect	Duration < 3.5 Year Construction Phase	Operational effect (related to vegetation reinstatement)		
			Year 1	Year 5	Year 10
PRoW 1T	Major / Moderate (125m)	Progressive reinstatement	Moderate	Moderate	Minor
PRoW 8T	Moderate to Minor (100m)	N/A	No Effect	N/A	N/A
PRoW 34Bo	Minor	N/A	No Effect	N/A	N/A

*Note: Significant effects in shown in **bold** and extent of significant effect for linear receptors shown in brackets.

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18.18 Glossary of terms and abbreviations

Table 18-47 Glossary of terms and abbreviations – landscape and visual impact

Term (acronym)	Definition
Above Ordnance Datum (AOD)	Ordnance Datum is the vertical datum used by the Ordnance Survey as the basis for deriving the height of ground level on maps. Topography may be described using the level in comparison to ‘above’ ordnance datum.
Area of Outstanding Natural Beauty (AONB)	Land protected for conservation and preservation under section 82 of the Countryside and Rights of Way Act 2000 for its natural beauty.
Baseline conditions	The environment as it appears (or would appear) immediately prior to the implementation of the Proposed Development together with any known or foreseeable future changes that will take place before completion of the Proposed Development.
Beneficial, Neutral or Adverse Types of Landscape Effect	<p>The landscape effects may be beneficial, neutral, or adverse.</p> <p>In landscape terms – a beneficial effect would require development to add to the landscape quality and character of an area. Neutral landscape effects would include low or negligible changes that may be considered as part of the ‘normal’ landscape processes such as maintenance or harvesting activities. An adverse effect may include the loss of landscape elements such as mature trees and hedgerows as part of construction leading to a reduction in the landscape quality and character of an area.</p>
Beneficial, Neutral or Adverse Types of Visual Effect	<p>The visual effects may be beneficial, neutral, or adverse.</p> <p>In visual terms – beneficial or adverse effects are less easy to define or quantify and require a subjective consideration of a number of factors affecting the view, which may be beneficial, neutral, or adverse. However it is not the assumption of this assessment that all change, including significant change is a negative experience. Rather this assessment has considered factors such as the visual composition of the landscape in the view together with the design and composition, which may or may not be reasonably, accommodated within the scale and character of the landscape as perceived from the receptor location.</p>

Term (acronym)	Definition
Bostall	A steep path or small road leading up a hill, particularly over the South Downs
BS	British Standard
CLVIA	Cumulative Landscape and Visual Impact Assessment
Code of Construction Practice (CoCP)	The code sets out the standards and procedures to which developers and contractors must adhere to when undertaking construction of major projects. This will assist with managing the environmental impacts and will identify the main responsibilities and requirements of developers and contractors in constructing their projects.
Construction Effects	Used to describe both temporary effects that arise during the construction phases as well as permanent existence effects that arise from the physical existence of development (for example new buildings).
Coombe	Also spelled 'combe' or 'coomb' referring to a steep, narrow valley, or to a small valley or large hollow on the side of a hill which is often a dry valley (no water course) in south western England.
CSF	Coombe Solar Farm
Cumulative effects	Additional changes caused by a Proposed Development in conjunction with other similar developments or as a combined effect of a set of developments, taken together.
Cumulative Effects Assessment (CEA)	Assessment of impacts as a result of the incremental changes caused by other past, present and reasonably foreseeable human activities and natural processes together with the Proposed Development.
Cumulative landscape effects	Effects that 'can impact on either the physical fabric or character of the landscape, or any special values attached to it' (Scottish Natural Heritage, 2012)
Cumulative visual effects: In combination In succession Sequentially	<p>Effects that can be caused by combined visibility, which 'occurs where the observer is able to see two or more developments from one viewpoint' and/or sequential effects which 'occur when the observer has to move to another viewpoint to see different developments' (SNH 2012)</p> <ul style="list-style-type: none"> • In combination: Where two or more developments are or would be within the observer's arc of vision at the same time

Term (acronym)	Definition
	<p>without moving his/her head (GLVIA3, 2013 Table 7.1).</p> <ul style="list-style-type: none"> In succession: Where the observer has to turn his/her head to see the various developments – actual and visualised (GLVIA3, 2013 Table 7.1). Sequential cumulative effect. Occurs where the observer has to move to another viewpoint to see the same or different developments. Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths (GLVIA3, 2013 Table 7.1).
DCO Application	An application for consent to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.
Decommissioning	The period during which a development and its associated processes are removed from active operation.
Degree of change	A combination of the scale extent and duration of an effect also defined as ‘magnitude’.
Designated Landscape	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
Development Consent Order (DCO)	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
Direct effects	An effect that is directly attributable to the Proposed Development.
DSM	Digital Surface Model
DTM	Digital Terrain Model
ELC	European Landscape Convention
Elements	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.

Term (acronym)	Definition
Embedded environmental measures	Equate to 'primary environmental measures' as defined by Institute of Environmental Management and Assessment (2016). They are measures to avoid or reduce environmental effects that are directly incorporated into the preferred masterplan for the Proposed Development.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
Environmental Measures	Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible remedy identified effects. (GLVIA3, 2013 Para 3.37).
Environmental Statement (ES)	The written output presenting the full findings of the Environmental Impact Assessment.
Expert Topic Group (ETG)	As part of the Evidence Plan Process, the ETGs are formed of experts from relevant organisations relative to the topics considered. These groups are established to discuss and agree the evidence and assessment requirements for each EIA and HRA topic area identified
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach and the information required to support the EIA and HRA for certain aspects.
Feature	Particularly prominent or eye-catching elements in the landscape such as tree clumps, church towers or wooded skylines OR a particular aspect of the project proposal.
Formal consultation	Formal consultation refers to statutory consultation that is required under Section 42 and Section 47 of the Planning Act 2008 with the relevant consultation bodies and the public on the preliminary environmental information.
FoV	Field of View
Future Baseline	Refers to the situation in future years without the Proposed Development.
Geographical Information System (GIS)	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.
GLVIA 3	Guidelines for Landscape and Visual Impact Assessment, Third Edition, published jointly by the Landscape Institute

Term (acronym)	Definition
	and Institute of Environmental Management and Assessment, 2013.
Habitats Regulation Assessment (HRA)	The assessment of the impacts of implementing a plan or policy on a European Site, the purpose being to consider the impacts of a project against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site.
Heritage	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.
HGV	Heavy Goods Vehicle
Historic Landscape Characterisation (HLC)	Historic characterisation is the identification and interpretation of the historic dimension of the present-day landscape or townscape within a given area.
Horizontal Directional Drill (HDD)	An engineering technique avoiding open trenches.
IEMA	Institute of Environmental Management and Assessment
Impact	The changes resulting from an action.
Indirect effects	<p>Effects that result indirectly from the proposed project as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.</p> <p>Often used to describe effects on landscape character that are not directly impacted by the Proposed Development such as effects on perceptual characteristics and qualities of the landscape.</p>
Iterative design process	The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.
Key characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Land cover	The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.

Term (acronym)	Definition
Landscape and Visual Impact Assessment (LVIA)	A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity.
Landscape capacity	The amount of specified development or change which a particular landscape and the associated visual resource is able to accommodate without undue negative effects on its character and qualities.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Area (LCA)	These are single unique areas which are the discrete geographical areas of a particular landscape type.
Landscape Character Assessment	The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.
Landscape Character Types (LCTs)	Distinct types of landscape which are relatively homogenous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement patterns, and perceptual and aesthetic attributes (GLVIA3 2013).
Landscape classification	A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.
Landscape constraints	Components of the landscape resource such as views or mature trees recognised as constraints to development. Often associated with landscape opportunities.
Landscape effects	Effects on the landscape as a resource in its own right. An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern here is with how the proposal will affect the elements that make up the landscape, the aesthetic and

Term (acronym)	Definition
	perceptual aspects of the landscape and its distinctive character. (GLVIA3 2013, Para 5.1).
Landscape patterns	Spatial distributions of landscape elements combining to form patterns, which may be distinctive, recognisable and describable (e.g. hedgerows and stream patterns).
Landscape qualities	A term used to describe the aesthetic or perceptual and intangible characteristics of the landscape such as scenic quality, tranquillity, sense of wildness or remoteness. Cultural and artistic references may also be described here.
Landscape quality (condition)	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Landscape receptors	Defined aspects of the landscape resource that have the potential to be affected by a proposal
Landscape resource	The combination of elements that contribute to landscape context, character, and value.
Landscape sensitivity	The sensitivity of the landscape to a particular development considers the susceptibility of the landscape and its value.
Landscape plan	The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or area as a whole, usually expressed in formally adopted plans and programmes or related documents.
Landscape value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.
Level of effect	Determined through the combination of sensitivity of the receptor and the proposed magnitude of change brought about by the development.
Likely Significant Effects	It is a requirement of Environmental Impact Assessment Regulations to determine the likely significant effects of the Proposed Development on the environment which should relate to the level of an effect and the type of effect.
Magnitude (of change)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it

Term (acronym)	Definition
	occurs, whether it is reversible or irreversible and whether it is short term or long term in duration'. Also known as the 'degree' or 'nature' of change.
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for renewable energy projects with an installed capacity greater than 100MW.
NCA	National Character Area
NCAP	National Character Area Profiles
NE	Natural England
NPPF	National Planning Policy Framework
NPS	National Policy Statement
Onshore part of the PEIR Assessment Boundary	An area that encompasses all planned onshore infrastructure.
OS	Ordnance Survey
Proposed DCO Order Limits	The Proposed DCO Order Limits combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including the temporary and permanent construction and operational work areas.
Perception	Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).
Perceptual Aspects	A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity. (GLVIA3, 2013 Box 5.1)
Photomontage	A visualisation which superimposes an image of the Proposed Development upon a photograph or series of photographs.
Planning Inspectorate	The Planning Inspectorate deals with planning appeals, national infrastructure planning applications, examinations of local plans and other planning-related and specialist casework in England and Wales.

Term (acronym)	Definition
PPG	Planning Practice Guidance
Preliminary Environmental Information Report (PEIR)	The written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation and presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development, the assessment approach that has been undertaken, and the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.
Proposed Development	The development that is subject to the application for development consent, as described in Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4).
Rarity	The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type. (GLVIA3 2013, Box 5.1)
Receptor	Physical landscape resource, special interest, or viewer group that will experience an effect.
Recreation Value	Evidence that the landscape is valued for recreational activity where experience of the landscape is important. (GLVIA3 2013, Box 5.1)
RED	Rampion Extension Development Limited
Representativeness	Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples.
Scale Indicators	Landscape elements and features of a known or recognisable scale such as houses, trees, and vehicles that may be compared to other objects, where the scale of height is less familiar, to indicate their true scale.
Scenic quality	Depends upon perception and reflects the particular combination and pattern of elements in the landscape, its aesthetic qualities, its more intangible sense of place or 'genius loci' and other more intangible qualities. (GLVIA3 2013, Box 5.1)
Scoping Opinion	A Scoping Opinion is adopted by the Secretary of State for a Proposed Development.

Term (acronym)	Definition
Scoping Report	A report that presents the findings of an initial stage in the Environmental Impact Assessment process.
SDNP / SDNPA	South Downs National Park / South Downs National Park Authority
SDW	South Downs Way
Seascape	Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.
Secretary of State	The Minister for Department for Energy Security and Net Zero (DESNZ).
Sense of Place (genius loci)	The essential character and spirit of an area: 'genius loci' literally means 'spirit of the place'.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Significance	A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.
Significant effects	<p>It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.</p> <p>The significance of an effect gives an indication as to the degree of importance (based on the magnitude of the effect and the sensitivity of the receptor) that should be attached to the impact described.</p> <p>Whether or not an effect should be considered significant is not absolute and requires the application of professional judgement.</p> <p>Significant – 'noteworthy, of considerable amount or effect or importance, not insignificant or negligible'. The Concise Oxford Dictionary.</p> <p>Those levels and types of landscape and visual effect likely to have a major or important / noteworthy or special effect of which a decision maker should take particular note.</p>
SLVIA	Seascape, Landscape and Visual Impact Assessment
SUDs	Sustainable Drainage System

Term (acronym)	Definition
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific Proposed Development without undue negative consequences.
Sustainability	The principle that the environment should be protected in such a condition and to such a degree that ensures new development meets the needs of the present without compromising the ability of future generations to meet their own needs.
Temporal Scope	The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur and are typically defined as either being temporary or permanent.
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of wind energy development the application is for a 30 year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.
The Applicant	Rampion Extension Development Limited (RED)
Time depth	Historical layering – the idea of landscape as a ‘palimpsest’, a much written-over asset of landscape.
Type or Nature of effect	Whether an effect is direct or indirect, temporary or permanent, positive (beneficial), neutral or negative (adverse) or cumulative.
Viewpoints	<p>Selected for illustration of the visual effects fall broadly into three groups:</p> <p>Representative Viewpoints: selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ – for example certain points may be chosen to represent the view of users of particular public footpaths and bridleways;</p> <p>Specific Viewpoints: chosen because they are key and sometimes promoted viewpoints within the landscape, including for example specific local visitor attractions, such as landscapes with statutory landscape designations or viewpoints with particular cultural landscape associations.</p> <p>Illustrative Viewpoints: chosen specifically to demonstrate a particular effect or specific issues, which might, for</p>

Term (acronym)	Definition
Visual amenity	The overall views and surroundings, which provide a visual setting or backdrop to the activities of people living, working, recreating, visiting or travelling through an area.
Visual effect	Effects on specific views and on the general visual amenity experienced by people.
Visual Receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visual sensitivity	The sensitivity of visual receptors such as residents, relative to their location and context, to visual change proposed by development.
Visualisation	Computer visualisation, photomontage, or other technique to illustrate the appearance of the development from a known location.
Wireline	A computer-generated line drawing of the DTM (digital terrain model) and the Proposed Development from a known location.
WSCC	West Sussex County Council
Zone of Theoretical Visibility (ZTV)	A map, usually digitally produced, showing areas of land within which a development is theoretical visible.

18.19 References

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