

# A30 Chiverton to Carland Cross TR010026

## 6.2 ENVIRONMENTAL STATEMENT CHAPTER 7 LANDSCAPE

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APFP Regulation 5(2)(a)  
Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

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Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

**A30 Chiverton to Carland Cross  
Development Consent Order 201[x]**

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**6.2 ENVIRONMENTAL STATEMENT  
CHAPTER 7 LANDSCAPE**

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## 7 Landscape

### 7.1 Introduction

- 7.1.1 This ES Volume 6 Document Ref 6.2 ES Chapter 7 on Landscape and Visual Assessment (LVIA) sets out the assessment of the likely significant effects of the scheme on the character of the landscape and on the visual amenity of people at viewpoints from which they would be able to see the scheme.
- 7.1.2 Effects on landscape and visual receptors are closely related but separately assessed, the former relating specifically to the landscape as a resource and its overall character and the latter relating to views and the visual amenity of people.
- 7.1.3 The landscape baseline identifies landscape receptors within the study area (see section 7.4) including component characteristics of the receiving landscape as well as its overall character. The characters of designated landscapes are assessed as separate receptors.
- 7.1.4 The visual baseline identifies existing views to, across or from the scheme, and identifies the visual receptors, such as nearby residents, users of Public Rights of Way (PRoWs), transport routes and publicly accessible heritage assets, whose visual amenity might be affected by the scheme.
- 7.1.5 The baseline landscape and visual environment have been surveyed by a qualified Landscape Architect (see section 7.2 Competent Expert) and characterised to inform this ES, then potential receptors have been identified and assessed to determine their sensitivity to changes of the type proposed.
- 7.1.6 Through understanding the scheme in its context, the magnitude of change that would be experienced by each receptor has been assessed.
- 7.1.7 Through applying professional judgement in line with Guidelines for Landscape and Visual Impact Assessment<sup>1</sup> (GLVIA3), the sensitivity and magnitude of change for each receptor has been combined to give a level of effect and a conclusion has been drawn in each case as to whether the effects are significant or not.
- 7.1.8 Finally, where possible, landscape mitigation has been designed to reduce adverse effects and maximise beneficial effects. The long-term residual effects have been assessed with mitigation in place.

### 7.2 Competent Expert

- 7.2.1 The Landscape lead is a Chartered Landscape Architect. They have a BSc in Biological Sciences from the University of Bristol and a Masters in Landscape Architecture from Edinburgh College of Art. They are Chartered Member of the UK Landscape Institute. Full details are provided in Volume 6 Document Ref 6.4 Appendix 1.1

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<sup>1</sup> The Landscape Institute / Institute of Environmental Management and Assessment (IEMA), Guidance on Landscape and Visual Impact Assessment, 3rd Edition, 2013.

## 7.3 Legislative and Policy Framework

### European Landscape Convention

7.3.1 The following paragraphs regarding the European Landscape Convention<sup>2</sup> are quoted from the Institute of Environmental Management & Assessment (IEMA) and the Landscape Institute's Guidance on Landscape and Visual Impact Assessment<sup>3</sup>:

7.3.2 'The UK has signed and ratified the European Landscape Convention (ELC) since 2002, when the last edition of this guidance was published. The recognition that government has thus given to landscape matters raises the profile of this important area and emphasises the role that landscape can play as an integrating framework for many areas of policy. The ELC is designed to achieve improved approaches to the planning, management and protection of landscapes throughout Europe and to put people at the heart of this process.'

### National policy

7.3.3 A framework of national and local legislation and planning policy guidance exists to protect and conserve the landscape.

#### National Policy Statement for National Networks

7.3.4 The National Policy Statement for National Networks provides direction on the treatment of Landscape and Visual impacts within transport projects

7.3.5 Paragraph 5.143 – 5.148<sup>4</sup> sets out guidance relating to landscape issues and includes:

- *“Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts;*
- *The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation).*
- *Any statutory undertaker commissioning or undertaking works in relation to, or so as to affect land in a National Park or Areas of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000.”*

#### National Planning Policy Framework

7.3.6 Within the revised National Planning Policy Framework (NPPF, 2018)<sup>5</sup> there are three dimensions to sustainable development: economic, social and environmental. Of particular relevance to the assessment of landscape and visual effects is the 'environmental role' describes the objective at paragraph 8 c):

<sup>2</sup> Council of Europe, "European Landscape Convention," Florence, 2000.

<sup>3</sup> The Landscape Institute / Institute of Environmental Management and Assessment (IEMA), Guidance on Landscape and Visual Impact Assessment, 3rd Edition, 2013

<sup>4</sup> Department for Transport, National Policy Statement for National Networks, December 2014

<sup>5</sup> Ministry of Housing, Communities and Local Government, National Planning Policy Framework, July 2018



- *“to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy...”*

7.3.7 In paragraph 127 under Section 12 ‘Achieving well-designed places’ the Framework states that planning policies and decisions should ensure that developments:

- *a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;*
- *b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;*
- *c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change...; and*
- *d) establish or maintain a strong sense of place...”*

7.3.8 In paragraph 170 under Section 15 ‘Conserving and enhancing the natural environment’ the Framework states that the planning system should contribute to and enhance the natural and local environment by

- *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- *b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- *d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

7.3.9 At Paragraph 171 it also promotes taking a strategic approach to

- *“..maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries”*

## **Local policy and guidance**

### Cornwall Local Plan (2016)

7.3.10 A review of the relevant planning policy has been undertaken in the context of LVIA. Local planning policies are set out in the Cornwall Local Plan (2016)<sup>6</sup>.

7.3.11 Policies considered in this assessment are set out below and where appropriate relevant extracts have been included for ease of reference.

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<sup>6</sup> Cornwall Council, “Cornwall Local Plan,” November 2016.

*Policy 3: Role and function of places*

- *“...4. Within the AONB or its setting, development will be supported where it is in accordance with the other policies of this Plan and can demonstrate that it conserves and enhances the landscape character and natural beauty of the AONB.”*

*Policy 23: Natural environment*

- *“1. Development proposals will need to sustain local distinctiveness and character and protect and where possible enhance Cornwall’s natural environment and assets according to their international, national and local significance.*
- *2 Cornish Landscapes: Development should be of an appropriate scale, mass and design that recognises and respects landscape character of both designated and un-designated landscapes. Development must take into account and respect the sensitivity and capacity of the landscape asset, considering cumulative impact and the wish to maintain dark skies and tranquillity in areas that are relatively undisturbed, using guidance from the Cornwall Landscape Character Assessment and supported by the descriptions of Areas of Great Landscape Value...”*
- *“4. Avoidance, mitigation and compensation for landscape, biodiversity and geodiversity impacts: Development should avoid adverse impact on existing features as a first principle and enable net gains by designing in landscape and biodiversity features and enhancements, and opportunities for geological conservation alongside new development. Where adverse impacts are unavoidable they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort.”*

7.3.12 Further relevant Local Plan policies include:

- Policy 12 Design;
- Policy 16 Health and wellbeing;
- Policy 21 Best use of land and existing buildings;
- Policy 23 Natural environment. See also:
  - Cornwall’s Natural and Historic Environment 2.132-2.136, 2.146-2.147;
  - AONB 2.150;
  - Heritage Coast 2.151;
  - Landscape Character 2.152;
  - AGLV 2.153;
  - International, National, and Local Designated sites: 2.162 – 2.165;
  - Ancient Woodland 2.168-2.169;
- Policy 24 Historic environment;
- Policy 25 Green infrastructure;
- Policy 27 Transport and accessibility; and
- Policy 28 Infrastructure.

7.3.13 Design and environmental guidance documents produced by Cornwall Council listed below, provide development advice on working with regionally-appropriate building materials, landscape features and systems, and plant species. The Cornwall AONB Management Plan, provides detail on the landscape character of the designation, and details policies regarding its management.

Supplementary guidance:

- Cornwall Council, Cornwall Design Guide, (July 2017)<sup>7</sup>;
- Cornwall Council, A Green Infrastructure Strategy for Cornwall – A strategic framework, April 2012<sup>8</sup>;
- Cornwall Council, Cornwall’s Environmental Growth Strategy (2015-2065)<sup>9</sup>;
- Cornwall Council, Cornwall AONB Management Plan 2016 – 2021<sup>10</sup>;
- Cornwall Council, Biodiversity (June 2017)<sup>11</sup>; and
- Diacono Associates in conjunction with White Consultants, Cornwall & Isles of Scilly Landscape Character Study (May 2007)<sup>12</sup>.

## 7.4 Study Area and Extent of Visibility

- 7.4.1 The Zone of Theoretical Visibility (ZTV) is based on 5m Digital Terrain Map (DTM) data, to identify areas from which the scheme would theoretically be visible.
- 7.4.2 The DTM data reflects the ‘bare earth’ condition with heights data on a 5m grid and does not allow for minor undulations in topography. In order to get a more accurate representation of the visibility of the scheme, existing substantial built form and woodland, taken from the Ordnance Survey Vector Map, were added to the terrain and have been extruded to the following conservative estimates of average heights above ground level.
- Built form – 8m high representing the average 2 storey residential buildings; and
  - Substantial areas of structural vegetation – 8m high representing a semi-mature deciduous woodland.
- 7.4.3 The ZTV was generated by computer software which places 6m-high columns on the highest proposed points at either end and every 50m along the scheme. Six metres is estimated to represent a worst-case scenario for any vehicle or object likely to be using the scheme. This data is presented on a map in Volume 6 Document Ref 6.3 of this ES, Figure 7-1 showing the ZTV and viewpoints representing visual receptors whose views are considered likely to be affected.
- 7.4.4 Small individual buildings, hedgerows and individual trees are not included in the model, but in reality, where present, would provide additional screening. Therefore, the ZTV shows a worst-case scenario in terms of the predicted extent of visibility.
- 7.4.5 The ZTV combined with an iterative process of desk study, field work and preliminary assessment has informed the derivation of the assessment study area.
- 7.4.6 Initially desk based assessment covered a buffer area of 5km from the scheme’s application boundary to take account of any particularly sensitive receptors that might receive effects from the scheme. This identified areas of higher ground (represented by VP 29) up to 5km to the northwest at St Agnes which is subject to

<sup>7</sup> Cornwall Council, “Cornwall Design Guide,” 2013.

<sup>8</sup> Cornwall Council, “A Green Infrastructure Strategy for Cornwall: a strategic framework,” April 2012.

<sup>9</sup> Cornwall Council, “Cornwall’s Environmental Growth Strategy 2015-2065,” November 2016.

<sup>10</sup> Cornwall Council, “Cornwall AONB Management Plan 2016-2021”.

<sup>11</sup> Cornwall Council, “Biodiversity Supplementary Planning Document (SPD)” June 2017.

<sup>12</sup> Diacono Associates in conjunction with White Associates, “Cornwall and Isles of Scilly Landscape Character Study 2005-2007,” May 2007.

several landscape and heritage designations including Area of Outstanding Natural Beauty (AONB), World Heritage Site, Heritage Coast, Scheduled Monuments, and Open Access Land. For completeness, receptors in this area have been included in the assessment.

- 7.4.7 Next, due to the lack of other sensitive visual receptors between 2 and 5km from the scheme, a detailed desktop study was undertaken, focused in on a 2km buffer around the application boundary. There are a few sensitive receptors between 1 and 2km from the scheme. These include St Clement Area of Great Landscape Value (AGLV) and Open Access Land within Newlyn Downs. For completeness, a Wider Study Area of up to 2km is included to pick up these receptors considered sensitive enough to potentially receive effects from the scheme.
- 7.4.8 Following a detailed analysis of visibility within the surrounding landscape through field work, it was found that most receptors with the potential to receive likely significant effects lie within 1km of the scheme. The core study area for this assessment has therefore been set at 1km.
- 7.4.9 Volume 6 Document Ref 6.3 ES Figure 7-1 shows the Core 1km study area and the wider 2km study areas as well as a buffer containing the outlying group of receptors approximately 5km to the northwest of the scheme.
- 7.4.10 Using the ZTV, supported by field work, a selection of representative viewpoints have been chosen for assessment. The locations of the selected representative viewpoints are shown in Volume 6 Document Ref 6.3 of this ES on Figure 7-1.
- 7.4.11 Volume 6 Document Ref 6.3 ES Figure 7-5 includes the corresponding viewpoint photographs.

## 7.5 Potential Impacts

- 7.5.1 This ES chapter identifies landscape and visual receptors within the wider and core study area, which may be affected by the scheme. The types of receptors assessed are described below:

### Landscape receptors

- 7.5.2 The European Landscape Convention (ELC)<sup>13</sup> definition of “landscape” is:
- “... an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors.”*
- 7.5.3 Effects on the Landscape may arise where the characteristics, features or overall character of the landscape is modified by development. It is important to place the scheme in its context.
- 7.5.4 The loss or depletion of important landscape features can adversely affect the condition, and quality of the landscape as a resource in its own right as well as its overall character. Conversely, the addition of significant beneficial features can constitute an improvement to the landscape and its overall character.
- 7.5.5 Aspects of the landscape considered in the assessment that may be affected by the scheme include:

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<sup>13</sup> Council of Europe, “European Landscape Convention,” Florence, 2000.

- Landscape elements include physical features such as trees and hedgerows, topography, water courses, landforms, boundaries, transport corridors and recreation routes. Effects on these elements may arise where valued features are lost, gained or substantially modified as a result of the scheme;
- Aesthetic and perceptual characteristics of the landscape such as scale, texture and complexity, openness, tranquillity and remoteness; historic and cultural aspects and darkness at night;
- The overall character of the landscape and settlements made up of the components and characteristics above; and
- The character and settings of any areas designated specifically for their landscape or townscape value.

7.5.6 For this assessment, effects on the landscape as a resource have been assessed and reported in terms of landscape Character Areas (CAs) and designated landscapes. In reaching judgements about effects, the assessment also describes and considers physical changes to constituent elements of the landscape as a result of the scheme and changes to the perceptual characteristics of the landscape.

7.5.7 Designated landscapes and landscape features are mapped in Volume 6 Document Ref 6.3 of this ES on Figure 7-2 and 7-4 respectively.

7.5.8 The CAs are defined using the Cornwall and Isles of Scilly Landscape Character Assessment (CISLCA). These are mapped in Volume 6 Document Ref 6.3 of this ES on Figure 7-3.

7.5.9 These receptors have been grouped into two categories in terms of types of potential effects they might receive:

- Direct effects on the on physical components, characteristics and overall character of the local landscape as a result of the proposed changes within the scheme order limits.
- direct and indirect effects on physical components, characteristics and overall character of the CAs and designated landscapes, within the Core Study Area; and
- indirect effects on the characteristics and overall character of the CAs and designated landscapes within the 2km Wider Study Area and 5km buffer from which the scheme may be visible or otherwise perceived as part of the wider setting.

### **Visual receptors**

7.5.10 Visual receptors are people enjoying views from locations from which it is possible to obtain views of the scheme. Such locations include:

- private viewpoints, such as views from domestic residences or places of work; and
- public viewpoints such as roads or railway lines, Public Rights of Way (PRoW) or other footpaths, and areas of open space or recreational places with public access.

7.5.11 These views may be partial or full, glimpsed or direct. Impacts on the visual amenity of a particular receptor may arise where features intrude into or obstruct views, or where there is some other qualitative change to the view.

#### 7.5.12 Types of viewpoints that can be selected for LVIA include:

- Representative viewpoints, which represent the experience of different types of visual receptors;
- Specific viewpoints, chosen because they are key, promoted viewpoints within the landscape; and
- Illustrative viewpoints, to demonstrate a specific visual issue.

7.5.13 For this assessment, the majority of viewpoints are representative viewpoints representing, for example, views from several houses and a PRoW. It also includes specific viewpoints for views available from popular viewpoints such as St Agnes Head.

7.5.14 The visual receptors included in this assessment are described in section 7.7 Baseline Conditions. The viewpoints selected to represent these are mapped on a plan in Volume 6 Document Ref 6.3 of this ES on Figure 7-1 and the corresponding photographs are presented on the Photosheets in Volume 6 Document Ref 6.3 ES Figure 7-5.

7.5.15 It is notable that there is no right in planning law to a private view. This has been accepted by various appeal decisions determined by the Planning Inspectorate.

7.5.16 Nevertheless, private views are commonly considered as receptors of visual effects as part of LVIA. This assessment does include the visual amenity of private residential properties as receptors, but only from lower floors and gardens, and professional judgement has been made on the significance of such effects based on criteria included within Volume 6 Document Ref 6.4 ES Appendix 7.1 Landscape and visual assessment criteria, and made without prejudice to the planning issues above. It is for the competent Authority (in this case the Secretary of State supported by the Planning Inspectorate) to judge whether or not the predicted effects on visual amenity of private receptors is a material consideration in determining the application.

## 7.6 Assessment Methodology

### Guidance and desk study

7.6.1 This assessment has followed guidance set out in the following documents:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3). The Landscape Institute / Institute of Environmental Management and Assessment (IEMA). (2013)<sup>14</sup>;
- The DMRB Volume 11: Section 2, Part 5, Assessment and Management of Environment Effects. Highways Agency. (August 2008)<sup>15</sup>;
- The DMRB Volume 11: Section 3, Part 5, Landscape Effects. Highways Agency. (June 1993/updated August 1994)<sup>16</sup>;
- IAN 135/10 Landscape and Visual Effects Assessment. Highways Agency. (2010)<sup>17</sup>;

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<sup>14</sup> The Landscape Institute / Institute of Environmental Management and Assessment (IEMA), Guidance on Landscape and Visual Impact Assessment, 3rd Edition, 2013.

<sup>15</sup> Highways Agency, "The DMRB Volume 11: Section 2, Part 5, Assessment and Management of Environment Effects.," August 2008.

<sup>16</sup> Highways Agency, "The CMRB Volume 11: Section 3, Part 5, Landscape Effects.," June 1993/updated August 1994.

<sup>17</sup> Highways Agency, "IAN 135/10 Landscape and Visual Effects Assessment," 2010.

- IAN 125/15 Environmental Assessment Update. Highways Agency. (2015)<sup>18</sup>;
- Photography and Photomontage in Landscape and Visual Impact Assessment, Landscape Institute Advice Note 01/11. The Landscape Institute. (2011)<sup>19</sup>;
- Visual representation of wind farms: good practice guidance: Scottish Natural Heritage. Version 2. (2014)<sup>20</sup>; and
- Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Institution of Lighting Professionals. (2011)<sup>21</sup>.

7.6.2 A desk study review of possible sources of information to establish the baseline conditions of the study area has been undertaken. These include land use data and policies detailed in relevant documents, sources cited above and the additional sources listed below:

- Cornwall and Isles of Scilly Landscape Character Study<sup>22</sup>;
- Cornwall Council interactive mapping website<sup>23</sup>;
- Ordnance Survey – 1:50,000 and 1:25,000 scale maps;
- Google Earth Pro and Street View;
- Bing Maps<sup>24</sup>; and
- GIS designation data sets.

7.6.3 A preliminary desktop study area was based on a study of the potential receptors, relevant policy areas and designations using a basic 3D wireframe model of the scheme in Google Earth and Google Street View.

### **Approach to identification of baseline conditions**

7.6.4 The following baseline studies have been carried out in order to inform the LVIA:

- Desk study and computer based visual analysis (ZTV as detailed above);
- Field work to familiarise with the landscape and its character and to select a set of representative viewpoints; This was undertaken during the day and night and during the summer and winter seasons, over several days during August, September, and December 2017;
- Verified baseline photography was undertaken in line with best practice and current guidance (GLVIA, 2013 and LI Advice Note 1/11); and
- Preparation of figures presented in Volume 6 Document Ref 6.3 of this ES, including:
  - Figure 7-1 Visibility and viewpoints;
  - Figure 7-2 Landscape designations;
  - Figure 7-3 Landscape character;

<sup>18</sup> Highways Agency, "IAN 125/15 Environmental Assessment Update," 2015.

<sup>19</sup> The Landscape Institute, "Photography and Photomontage in Landscape and Visual Impact Assessment - Landscape Institute Advice Note 01/11," 2011.

<sup>20</sup> Scottish Natural Heritage, "Visual Representation of Wind Farms: good practice guidance, Version 2," 2014.

<sup>21</sup> Institution of Lighting Professionals, "Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011," 2011.

<sup>22</sup> Diacono Associates in conjunction with White Associates, "Cornwall and Isles of Scilly Landscape Character Study 2005-2007," May 2007.

<sup>23</sup> Cornwall Council, "Cornwall Council Interactive Map," 2017. [Online]. Available: <https://map.cornwall.gov.uk/website/ccmap/>. [Accessed 2017].

<sup>24</sup> Microsoft, "Bing Maps," 2017. [Online]. Available: <https://www.bing.com/maps/>.

- Figure 7-4 Landscape elements and topography;
- Figure 7-5 Photosheets; and
- Figure 7-6 Environmental masterplans.

### **Assessment criteria and assignment of significance**

- 7.6.5 Typical criteria used in the assessment of receptors and effects is in accordance with IAN 135/10 Landscape and Visual Effects Assessment<sup>25</sup>. Typical criteria used in the judgement of effects are those from this document and they are presented in **Landscape and visual assessment criteria** (Volume 6 Document Ref 6.4 Appendix 7.1). The assessment also uses more up-to-date industry standard guidance set out in GLVIA3<sup>26</sup> as set out in paragraphs 7.6.6 and 7.6.7 below.
- 7.6.6 For each receptor, the baseline (existing condition) is described and its value assessed in terms of how valuable the receptor is (high, medium or low) and to what extent it is valued (individual, local community, local authority, national, international). GLVIA3 paragraphs 5.39 to 5.47 and 6.31 to 6.37.
- 7.6.7 The baseline is then reviewed alongside the description of the scheme incorporating any embedded mitigation measures. The susceptibility (high, medium or low) of each receptor to the proposed changes is then assessed. Combining judgements on the value of the receptor and its susceptibility to the type of change proposed, gives its overall sensitivity to change (high moderate or low).
- 7.6.8 For each receptor, the changes arising from the scheme are described and quantified to give a magnitude of change (major, moderate, minor, negligible or no change).
- 7.6.9 Next, the judgements on sensitivity and magnitude of change are combined to give an overall assessment of level of the effect (very large, large, moderate, slight or neutral).
- 7.6.10 Once the level of effects is understood, mitigation measures are incorporated where possible to reduce the predicted effects.
- 7.6.11 Finally, an assessment of the residual effects is made by reassessing the magnitude of change to each receptor once mitigation measures are in place.
- 7.6.12 The assessment determines the level or degree of effect that is likely to occur. The assessor then makes a judgement as to whether that effect should be considered a significant or material factor in respect of the planning application.
- 7.6.13 Any effect assessed as having a level of moderate or greater is usually considered to be significant. Any effect assessed to have a level of effect less than moderate is normally considered not to be significant.

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<sup>25</sup> Highways Agency, "IAN 135/10 Landscape and Visual Effects Assessment," 2010.

<sup>26</sup> The Landscape Institute / Institute of Environmental Management and Assessment (IEMA), Guidance on Landscape and Visual Impact Assessment, 3rd Edition, 2013.



## Temporal scope

- 7.6.14 The landscape and visual effects of the scheme would vary through time. The assessment therefore considers the effects on landscape character and visual amenity arising over the life of the project, through its construction and operation.
- 7.6.15 It is important to distinguish between temporary and permanent landscape and visual effects from construction and set out how these are reported in the assessment. The assessment of construction landscape and visual effects only identifies and assesses effects that are unique to the construction phase. The effects from the construction phase are temporary, short term and reversible.
- 7.6.16 Vegetation loss, is a direct, permanent and irreversible effect and is assumed to occur at the start of the construction phase. Direct changes to the character of the landscape and on views as a result of the physical loss of vegetation and other landscape elements would occur throughout the construction and operation of the project. However, in order to avoid double counting of effects, the resulting permanent effects on receptors is reported only once as part of the operational effects assessment.
- 7.6.17 Landscape and visual effects as a result of the works, such as the disruption caused by tall construction plant and chainsaws used during site clearance are assessed as part of the construction phase. The assessment of construction effects does take into account increased visibility of construction activities arising indirectly as a result of vegetation loss. The effect of this increased visibility is accounted for in the assessment of construction phase effects.
- 7.6.18 Another example is proposed landforms, which are permanent features of the operational phase. Landscape and visual effects arising from their presence are assessed and reported under operational effects. The temporary earthworks required to form them, including excavation, aggregate and earth movements, and stock piling during the works are assessed as construction effects in this section.
- 7.6.19 As the Proposed Development is gradually built throughout the construction phase, permanent effects would increasingly become part of the landscape and views. These effects are assessed as part of the operational phase in Section XX. They include, for example, permanent removal of trees or hedgerows, introduction of permanent earthworks and the presence of the proposed built elements, such as Roads bridges and underpasses.
- 7.6.20 The temporal consideration of construction and operation effects in this assessment is as follows:
- Short-term temporary construction effects during the 3 year construction phase, 2020 – 2023 (including any standard construction mitigation measures);
  - Medium-term operational effects which would occur between completion in the winter of the first year of operation (2023) until the fifteenth year of operation (2038) before landscape mitigation would have established (without mitigation, but taking into account measures designed into the scheme to reduce effects at source); and

- Long-term residual effects with mitigation from the 15th year after opening (2038), in accordance with IAN135/10<sup>27</sup>. This allows the assessment to take account of the mitigating effect of the proposed landscape mitigation once established).

- 7.6.21 The assessment also takes into consideration how views and the perception of landscape changes through the seasons and during the course of a day.
- 7.6.22 Field work and the first photographic survey work was undertaken in August 2017 at a time when the deciduous trees were in leaf. The screening effect of vegetation is most effective at this time of the year. Visibility across the landscape is greater in winter. Field work and photography was also undertaken in December 2017 and on several occasions throughout Spring 2018 whilst vegetation was out of leaf and visibility was at its greatest.
- 7.6.23 The assessment is based on a worst-case scenario in terms of visibility, but also considers the more visually contained landscape during summer months.

### **Photography and imaging**

- 7.6.24 For this ES, verified viewpoint photography was undertaken in winter. Additional baseline viewpoint photography in summer has also been provided. These summer photographic surveys were carried out by qualified landscape architects who are well versed with the methods and best practice required to produce verifiable photographs to be used in LVIA and visual representations. This photography is presented on Photosheets in Figure 7-5 in Volume 6 Document Ref 6.3 of this ES.
- 7.6.25 The methodology applied to produce the verified view data collection is described below.
- 7.6.26 Viewpoint locations were provided via an online Grid Reference Finder. Permissions from land owners were required and granted where applicable. Sample photographs from a previous site visit were also supplied for reference purposes.
- 7.6.27 A Canon EOS-1D X Digital SLR camera was used for the initial two-day photography shoot. Shooting full frame at 5184 x 3456 pixels. Due to visibility requirements for certain shot locations, 25, 26, 28 & 29 were captured with a Nikon D7100 Digital SLR, again with a fixed 50mm focal length. Shooting at 6000 x 4000 pixels. Further to feedback, shot locations 5, 7, 11 & 26 required a re-shoot due to angle of light. These were also captured with the use of a Nikon D7100. Summer Photography was undertaken using a Nikon D610 Full Frame Digital SLR fitted with a fixed 50mm Lens at 6016 x 4016 pixels.
- 7.6.28 For each shot the camera was positioned at a level which closely approximates the human eye altitude (approximately 1.6m). A point vertically beneath the centre of the lens was marked on the ground as a survey reference point, along with a camera height measurement reading. The date and time of each photograph taken was digitally recorded.

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<sup>27</sup> Highways Agency, "IAN 135/10 Landscape and Visual Effects Assessment," 2010.

- 7.6.29 A survey data collection was carried out where the A30 was scanned via a vehicle mounted scanner, collecting a dense array of spot levels captured along the highway to be implemented as a point cloud within the 3D software. GPS readings for each camera setup were recorded, as well as any necessary additional spot levels around the site. In some instances, ranging rods were used for the purpose of anchor points.
- 7.6.30 3Dsoftware allows for the integration of point cloud data alongside all CAD survey data recorded at each viewpoint. Virtual cameras are then placed according to GPS locations and setup with appropriate focal length and height. Individual photos are then placed as viewport backgrounds for which to then align survey anchor points via panning the camera - as was done in real world photography capture. The 3D scene was set up for 3D integration, lighting and rendering to a verified level.
- 7.6.31 The wide panoramic views are intended to give an understanding of the visual context. Theoretically, when printed at the correct size on an un-scaled A3 page and viewed at a distance of 400mm using one eye, the photographs closely represent the view experienced from each viewpoint by the viewer's naked eye.
- 7.6.32 The choice of an A3 format is for ease of handling and reproduction. The images should be viewed with the paper flat and at a comfortable distance with the viewer's arms bent to around 90° (approximately 400mm).
- 7.6.33 The photographs provide an illustrative tool for assessment that can be compared with an actual view in the field. They should never be considered as a substitute to visiting the actual viewpoint in person.

### Visualisations

- 7.6.34 The method for preparing photomontages accords with the guidance contained in the Landscape Institute Advice Note 01/11 (Photography and Photomontage in Landscape and Visual Impact Assessment)<sup>28</sup>. Consideration has also been given to guidance included in 'Visual representation of wind farms: good practice guidance: Scottish Natural Heritage (Version 2, 2014)<sup>29</sup>.
- 7.6.35 A three-dimensional (3D) model of the scheme is built in computer aided design software (CAD) with material finishes being assigned to the scheme. The camera positions and surveyed reference points are also modelled in CAD. The virtual camera is located at equivalent co-ordinates and height, and with the same 'lens', orientation and settings as used in the photograph at each viewpoint. The virtual 'reference points' such as built form and boundary features are set at the same heights and co-ordinates as those used as reference points in the photographs.
- 7.6.36 Virtual photographs of the model are taken or 'rendered' with virtual cameras in the 3D CAD software in positions equivalent to the locations from which the actual photographs were taken at each representative viewpoint. Each virtual view is rendered twice; once with associated reference points and another without.
- 7.6.37 The virtual photograph of the model is matched to the equivalent baseline photograph from the representative viewpoint, with particular emphasis on ensuring the correct alignment of the 'reference points' to align the model

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<sup>28</sup> Institution of Lighting Professionals, "Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011," 2011.

<sup>29</sup> Scottish Natural Heritage, "Visual Representation of Wind Farms: good practice guidance, Version 2," 2014.

correctly in the image. Once the alignment is made, the virtual photograph of the model is superimposed onto the photograph. The parts of the model that would be behind land, trees, buildings or other structures has been removed, so that the visualisation only shows parts of the model that would in reality be visible.

- 7.6.38 Presentation of photomontages includes a baseline photograph displayed above the relevant photomontage/s for each viewpoint where practicable. Viewpoint OS grid coordinates and viewpoint height above ordnance datum (AOD) are noted on the photomontage figure. Additional information on the photomontage figure (or elsewhere in this chapter including the Section above on Photography and Imaging) includes details of the camera, the lens focal length, the horizontal field of view, the orientation of the view, and the distance of the viewpoint.

Table 7-1 Table of viewpoints and visualisations

V	Description and location	Date (Winter)	Time (Winter)	Lens (mm)	Grid Reference	Elevation (m AOD)	Height (m)	Baseline View Winter	Baseline View Summer	PM Winter Year 1	PM Winter Year 15	PM Summer Year 1	PM Summer Year 15	Night time Baseline	PM night time
1	View from overbridge south of Three Burrows, looking northeast along A30, 200m southwest of the scheme.	18.12.17	09:35	50	SW 74417 46252	129.316	1.67	Y	Y						
2	View from Starbucks at Chiverton Cross, looking east towards A30, 10m west of the scheme.	18.12.17	09:22	50	SW 74690 46882	144.333	1.58	Y	Y						
3	View from Trevisson Business Park looking west, 60m southeast of the scheme.	18.12.17	09:53	50	SW 75364 47767	132.193	1.7	Y	Y	Y			Y	Y	Y
4	View from Four Burrows, looking northwest, 130m south of the scheme.	18.12.17	13:05	50	SW 76153 48254	147.353	1.68	Y	Y	Y	Y				
5	View from byway leading to Higher Callestick Farm, looking southeast towards A30, 800m north of the scheme.	18.12.17	12:22	50	SW 76589 49409	112.534	1.65	Y	Y						
6	View from the junction of B3284 with the bridleway 314/64/1, adjacent to the dwelling at Callestick Vean (South), looking east, adjacent to the scheme.	01.02.18	10:32	50	SW 77260 48791	105.98	1.66	Y	Y	Y	Y				
7	View from PRow, leading to Creegmeor Farm, looking southwest, 180m north-northwest from the scheme.	18.12.17	13:12	50	SW 77818 49127	97.676	1.67	Y	Y						
8	View from the B3284, looking west, 130m south of the scheme.	10.07.18	11:04	50	SW 78237 48732	116	1.6		Y			Y	Y	Y	Y
9	View from bridleway near Hillview, looking northeast towards A30, 60m south of the scheme.	19.12.17	13:45	50	SW 78703 49119	115.625	1.6	Y	Y	Y	Y				
10	View from outbuildings at Nanteague Farmhouse, looking southwest-west, 50m west-southwest of the scheme.	01.02.18	14:13	50	SW 79264 49487	81.888	1.67	Y	Y						
11	View from PRow east of Lower Ventongimps, looking south-southeast, 300m northwest of the scheme.	19.12.17	13:45	50	SW 79445 50213	81.266	1.8	Y	Y						
12	View from Marazanvose, looking southwest along the A30, 15m west of the scheme.	18.12.17	14:20	50	SW 79896 50332	79.658	1.68	Y	Y	Y	Y				
13	View from field within NFH, looking west towards A30, 100m southeast of the scheme.	18.12.17	12:25	50	SW 80063 50251	74.947	1.66	Y	Y	Y	Y				
14	View from NFH, looking southwest from garden beside the Grade II listed Farmhouse towards the A30, 120m east of the scheme.	18.12.17	12:11	50	SW 80117 50306	77.3	1.7	Y	Y	Y	Y				
15	View from PRow 3 between A30 and NFH, looking southwest, adjacent to the scheme.	18.12.17	12:34	50	SW 80055 50350	79.877	1.63	Y	Y	Y			Y		
16	View from entrance to Chyverton Park, adjacent Grade II listed Chyverton Park Lodge, looking southeast, adjacent to the scheme.	19.12.17	13:59	50	SW 80487 50913	90.063	1.6	Y	Y	Y	Y				
17	View from Hill House, adjacent to bridleway 319/9/1, looking northeast, 10m south of the scheme.	19.12.17	13:43	50	SW 80803 50983	104.741	1.65	Y	Y						
18	View from PRow 319/8/1, near Trerice, looking northeast towards A30, 600m southeast of the scheme.	19.12.17	13:16	50	SW 81882 51451	79.325	1.6	Y	Y						
19	View southwest from intersection of footpath near Church Lane, Zelah with existing A30, looking southwest along the A30, 30m west of the scheme.	19.12.17	12:45	50	SW 81303 51885	80.288	1.6	Y	Y						
20	View from the intersection of High Road and Henvor Lane, looking northeast, within the scheme.	19.12.17	12:30	50	SW 81402 52181	90.107	1.66	Y	Y						
21	View from Tregorlands, looking southeast, 60m northwest of the scheme.	19.12.17	12:15	50	SW 81875 52674	116.936	1.7	Y	Y						
22	View from Honeycombe Farm, looking northeast, 60m south of the scheme.	19.12.17	11:53	50	SW 82666 52715	102.552	1.75	Y	Y						
23	View from the minor road beside Pennycomequick, looking southeast, within the scheme.	19.12.17	11:18	50	SW 82482 52937	111.285	1.63	Y	Y						
24	View from Journey's End, looking southeast, 60m north-northwest of the scheme.	19.12.17	11:02	50	SW 83512 53493	133.807	1.64	Y	Y	Y	Y				
25	View from PRow 324/10/1 within Newlyn Downs, looking southeast towards trees at Carland Quarry, 1km north of the scheme.	07.01.18	14:38	50	SW 83397 54620	68.894	1.6	Y	Y	Y	Y				
26	View from base of turbine at southwest corner of Carland Cross Wind Farm, 120m northwest of the scheme.	01.02.18	14:18	50	SW 84242 54008	124.103	1.6	Y	Y						
27	View from Open Access heathland near the Carland Cross Barrow Cemetery, within the scheme.	19.12.17	09:51	50	SW 84144 53705	148.69	1.55	Y	Y	Y	Y				
28	View southeast from an unclassified local road, south of the intersection with Cargoll Road, 3.7km northwest of the scheme.	07.01.18	13:55	50	SW 81603 56440	92.084	1.6	Y	Y					Y	Y
29	View from St Agnes Beacon looking southeast, 5km northwest of the scheme.	07.01.18	12:47	50	SW 71013 50214	191.536	1.6	Y	Y						
30	View from Silverwell looking southeast, adjacent to the scheme.	18.12.17	14:05	50	SW 75214 47887	127.491	1.67	Y	Y	Y	Y				
31	View from entrance to Higher Ennis Farm, looking northwest, 90m south of the scheme.	19.12.17	09:56	50	SW 83750 53367	118.00	1.6	Y	Y						

## 7.7 Baseline Conditions

### Landscape receptors

- 7.7.1 The following paragraphs and tables describe the baseline and set out the judgement on value of each landscape receptor including landscape Character Areas (CA's) and designated landscapes. Refer to Volume 6 Document Ref 6.3 ES Figure 7-2 for a plan showing landscape designations and Volume 6 Document Ref 6.3 ES Figure 7-3 for a plan mapping the CAs.
- 7.7.2 The scheme and its landscape context are located wholly within National Character Area (NCA) 152: Cornish Killas<sup>30</sup>.
- 7.7.3 The 2007 Cornwall and Isles of Scilly Landscape Character Study (CISLCS)<sup>31</sup> is the most recent character assessment at a local scale for Cornwall. The majority of the scheme falls within CA 14 Newlyn Downs, while the south-western portion of the scheme near to Chiverton Cross lies within CA 11 Redruth, Camborne and Gwennap. The assessment covers direct and indirect effects on these CAs.
- 7.7.4 The wider study area also incorporates CA 12 St Agnes and CA 13 Fal Ria, Truro and Falmouth. The assessment covers indirect effects on these character areas.

#### National Character Area: NCA 152 Cornish Killas

- 7.7.5 This description of the NCA is included for context. The assessment of landscape character is carried out at a local scale in a proportional level of detail, as set out below in paragraphs 7.7.8 to 7.7.10.
- 7.7.6 Key relevant characteristics (as defined by the Natural England National Character Area Profile and confirmed by field work) are:
- “An undulating shillet (shale) plateau, with open vistas and a characteristic network of stone-faced earthen banks (Cornish hedgebanks), many enclosing fields in use since medieval times. From higher ground there are long views across a rather uniform landscape of mixed farming, with small villages and market towns.”* (Natural England, 2014)<sup>32</sup>
- 7.7.7 In the profile for each NCA, Natural England sets out Statements of Environmental Opportunity. These help to bring together relevant information and offer suggestions where action can be best targeted to conserve and improve the natural environment. Statements of Environmental Opportunity for NCA 152 are:

- **SEO 1:** Manage, restore, link and enhance the area's rich mosaic of wildlife habitats, expanding their quality, extent and range where appropriate. This needs to be achieved alongside sustainable agricultural practices, which contribute to soil and water quality as well as providing habitat management. This benefits the local economy, minimises soil erosion and flooding and provides increased recreational opportunities.
- **SEO 2:** Conserve, manage and increase understanding of the area's rich historic environment and its valuable interlinked geological and cultural heritage – including the mining legacy, the prehistoric and later settlements

<sup>30</sup> Natural England, “National Character Area Profile: 152 Cornish Killas,” 2014.

<sup>31</sup> Diacono Associates in conjunction with White Associates, “Cornwall and Isles of Scilly Landscape Character Study 2005-2007,” May 2007.

<sup>32</sup> Natural England, “National Character Area Profile: 152 Cornish Killas,” 2014.

and ritual remains, and the unique Cornish hedges and field patterns – which combine to bring a unique historical and cultural identity to Cornwall.

- **SEO 3:** Sustainably manage the visitor pressure associated with this distinctive landscape to ensure that the numerous recreational opportunities, such as the South West Coast Path and high-quality beaches, continue to be enjoyed sustainably by the local community and visitors. Develop volunteering opportunities both for local residents and for visitors, and endeavour to better connect people with places and natural assets<sup>33</sup>.

#### Local landscape character

7.7.8 The character of Cornwall has been appraised in the Cornwall and Isles of Scilly Landscape Character Study (CISLCS)<sup>34</sup> (2007) which identified 40 character areas, referred to below as landscape Character Areas (CAs). The scheme is sited within two CA's:

- CA 11 Redruth, Camborne and Gwennap; and
- CA 14 Newlyn Downs.

7.7.9 These are the only CA's which would receive direct effects on their constituent elements and overall character. The following CA's would only receive indirect effects on their settings as a result of the scheme:

- CA 12 St Agnes;
- CA 13 Fal Ria, Truro and Falmouth; and
- CA 15 Newquay and Perranporth Coast.

7.7.10 In order to keep the assessment proportionate, the description here sets out and assesses potential effects on those CAs which are likely to receive any significant effect on their settings. Due to the proximity and the number and importance of views available from the CAs of the scheme site, these include:

- CA 11 Redruth, Camborne and Gwennap;
- CA 12 St Agnes;
- CA 13 Fal Ria, Truro and Falmouth; and
- CA 14 Newlyn Downs.

7.7.11 The settings of the other wider CA's have no noticeable visible or otherwise perceived connection with the scheme. Thus, they are not likely to receive any significant effects from the scheme and have not been included in this assessment

#### *CA 11 Redruth, Camborne and Gwennap*

7.7.12 For reference, Viewpoints 1 and 2 are within this CA.

7.7.13 Predominantly pastoral landscape, with trees and shrubs found in the valleys and punctuating agricultural patterns, including farm buildings, hedges, fields, and narrow lanes. Field structures are strong, with fields on the upper plateau being generally larger and with the even form of more recent enclosure. The enclosed land on hillsides and in the valleys is of ancient origin and tends to be irregular and smaller in size. This farmland is a mixture of improved and rough grazing, in

<sup>33</sup> Natural England, "National Character Area Profile: 152 Cornish Killas," 2014.

<sup>34</sup> Diacono Associates in conjunction with White Associates, "Cornwall and Isles of Scilly Landscape Character Study 2005-2007," May 2007.

addition to considerable rough land. Evidence of historic industrial mining activities is common and is particularly concentrated in the CWDM WHS A6i Gwennap Mining District, most of which is within this CA. Most noticeable are the legacy mining buildings, such as old engine houses, while the spoil heaps are now often sites of regenerating heathland. At the coast, the landscape becomes more open and the lowland heathland habitat gives way to bracken and scrub. In this post-industrial landscape, the evidence of human intervention through time is quite apparent. A portion of this is of historic origin and lends an atmospheric quality to the landscape, however, in combination with the more modern interventions, the landscape has developed a cluttered appearance.

7.7.14 Further key relevant characteristics (as defined by the Cornwall and Isles of Scilly Landscape Character Study and confirmed by field work) are:

- Pastoral landscape of improved and rough grazing with extensive areas of rough land.
- Valleys which are shallow and narrow, containing small streams.
- A well populated landscape containing Cornwall's largest built-up area<sup>35</sup>.

*Value*

7.7.15 The value of CA 11 Redruth, Camborne and Gwennap is summarised in Table 7-3 below.

**Table 7-2 Landscape Character summary within CA 11 Redruth, Camborne and Gwennap**

Characteristic	Description	Value
Landscape designations	Contains majority of CWDM WHS – A6i Gwennap Mining District (95%) Small parts of other CWDM WHS's including: A7 St Agnes (<5%); A5i Camborne and Redruth Mining District (15%) Areas of ancient woodland, includes some of the Cornwall AONB near Portreath.	High
Landscape elements	Predominantly pastoral landscape, with trees and shrubs found in the valleys and punctuating agricultural patterns, including farm buildings, hedges and fields.	Medium
Quality and condition	Good, however greater management of historic mining areas and settlement expansions is needed.	Medium
Cultural/Social characteristics	Open space land on coast, strong and legible mining history, dispersed, but dense settlement patterns a result of past miners' smallholdings	High
Heritage	Post-medieval Enclosed Land (High value - c.50%), Medieval Farmland (High value - 20%), Settlement (Medium value - 10%), Upland Rough Ground (High value - 5%), Military (Medium value - 5%), Industrial disused (Medium value - <5%), Ornamental	High

<sup>35</sup> Diacono Associates in conjunction with White Associates, "Cornwall and Isles of Scilly Landscape Character Study 2005-2007," May 2007.



Characteristic	Description	Value
	(Medium value - <5%), Plantations and Scrub (Medium value - <5%), Woodland (deciduous) (Medium value - <5%).	
Perceptual and aesthetic	Landscape with a peaceful and secluded atmospheric which becomes more apparent away from major transport routes, such as the A30. Due to the large number and scattered nature of settlements, the night-time character is not intrinsically dark. The area includes areas of low, medium and higher district brightness, in and around Threemilestone, Chacewater, Scorrier, Blackwater, Redruth and Chiverton Cross.	Medium

7.7.16 Overall Value is **high** with a considerable portion of the area designated of **national** Importance.

*Susceptibility*

7.7.17 The quality and condition of the landscape is good. Post-industrial sites lack management and many of the historic character areas are vulnerable to change, particularly the Upland Rough Ground. Vegetation along field boundaries require strengthening and some farmland is reverting to scrub. The quality of newer development at the edges of settlements detracts from the overall character and sense of place. Susceptibility to change of the type proposed is **medium**.

*Sensitivity*

7.7.18 Combining this receptor's high value with its medium susceptibility to change, its setting is assessed as having a **high** sensitivity to change.

CA 12 St Agnes

7.7.19 For reference, Viewpoint 29 is within this CA.

7.7.20 Open and exposed granite intrusion with little vegetation other than sprawling heath, scrub and bracken. Some arable pasture is found on the plateau where the field pattern is strongly rectilinear. Built remnants of the mining industry including, engine houses and mining tracks and found frequently, particularly within the CWDM WHS – A7 St Agnes Mining District. Settlements are largely of village size and are grouped on terraces within valleys.

7.7.21 Key relevant characteristics (as defined by the Cornwall and Isles of Scilly Landscape Character Study and confirmed by field work) are:

- *Coastal plateau of slate killas with granite intrusion, rising to St Agnes Beacon.*
- *High slate cliffs form a dramatic and varied coastline with sandy coves at the mouth of streams and sandy low tide beaches.*
- *Open and exposed landscape with almost no tree cover on plateau and hill top.*
- *Extensive evidence of past mining of tin and copper with derelict sites, bare ground and features such as engine houses, a harbour and mining tracks.*
- *Extensive areas of Lowland Heathland and unenclosed rough ground of scrub and bracken on coastal cliffs and valleys, often associated with mine sites.*

- *A mainly recent enclosure pattern of small to medium fields of improved permanent pasture and rough grazing with more recent farming over former miner's smallholdings.*
- *Villages cluster as terraces on the steep valley sides at the coast with scattered former mining cottages and new farms on the plateau. [1]*

#### Value

7.7.22 The value of CA 12 St Agnes is summarised in Table 7-3 below.

**Table 7-3 Landscape Character summary within CA 12 St Agnes**

Characteristic	Description	Value
Landscape designations	Cornwall AONB – St Agnes section CWDM WHS – St Agnes section (90%) Heritage Coast – St Agnes Open Space Access land	High
Landscape elements	Open and exposed granite coastal plateau with negligible vegetation on higher areas on and around the St Agnes Beacon.	Medium
Quality and condition	High scenic quality, which has been degraded by increased tourism and poor management of landscape features and recreational paths.	Medium
Cultural/Social characteristics	St Agnes Beacon Open Access Land Strong industrial mining history	High
Heritage	Post-medieval Enclosed Land (High value - 40%), Coastal Rough Ground (High value - 20%), Settlement (Medium value - 10%), Medieval Farmland (High value - 5%), Industrial disused (Medium value - 5%), Intertidal and inshore water (Medium value - 5%), Recreational (Low value - <5%).	High
Perceptual and aesthetic	Unique and coherent character with St Agnes beacon acting as a recognisable feature from much of the surrounding area. The relatively secluded location of the CA on this area of coastline, results in an intrinsically dark night-time character. The area receiving the most light is on the higher ground around St Agnes.	Medium

7.7.23 Overall Value is **high** and large proportion of the area is of **national** importance

#### Susceptibility

7.7.24 The quality and condition of the landscape are deteriorating. Development is encroaching on high ground towards St Agnes plateau and there is a loss of tranquillity from an increase in movement by people and traffic. At the coast this movement is resulting in erosion. Susceptibility to change of the type proposed is **medium**.

#### Sensitivity

7.7.25 Combining this receptor's high value with its medium susceptibility to change, its setting is assessed as having a **high** sensitivity to change.

### CA 13 Fal Ria, Truro and Falmouth

- 7.7.26 There is little intervisibility between the Scheme and this CA, however it lies only 200m from the Scheme boundaries. Furthermore, the host CA's 11 and 12 provide the wider setting for the upper slopes of the valleys within CA 13.
- 7.7.27 CA13 is comprised of a series of deeply incised valleys that form a catchment feeding into the River Fal and Fal Estuary. The topography is therefore formed of steep valley sides running from the plateau of CA 11 Redruth, Camborne, and Gwennap and CA 14 Newlyn Downs, down to the rivers and creeks in the valley floor. The valley sides are frequently wooded, some of which is Ancient Woodland or semi-natural.
- 7.7.28 The portion of this CA within the study area tends towards a larger scale mosaic of regular fields, while a more irregular smaller-scale mosaic with enclosures of ancient origin are found commonly in the rest of the CA.
- 7.7.29 Key relevant characteristics (as defined by the Cornwall and Isles of Scilly Landscape Character Study and confirmed by field work) are:
- *An interlocking and winding ria (drowned river valley) system of small creeks and river valleys that drain into the River Fal that broadens to form the Fal Estuary.*
  - *Muddy creeks with brackish open water and wet grassland, merging with Coastal Saltmarsh close to tidal limits.*
  - *Semi-natural woodland and Ancient Woodland on steep slopes, with ornamental and conifer estate planting inland on the undulating plateau with Monterey Pines a feature. Where woodland does not dominate the slopes there are pasture fields usually with scrub vegetation down to the water's edge.*
  - *Extensive forestry north of Ladock and west of Tresillian.*
  - *Farmland is a mix of pasture and arable with some areas of upland rough ground with a small field pattern of anciently enclosed land with more regular larger fields indicating areas of more recent enclosure. Fields are bounded by Cornish Hedges with extensive tree cover on these boundaries, adding to the wooded feel.*
  - *Creeks that are dominated by former ports in small villages, with an industrial, water-related character of small quays and landing stages.*
  - *Harbours and defence fortifications at the mouth of the estuary. Quays and tide mills at the heads of creeks.*
  - *A coastal zone of low rocky cliffs backed by farmland interspersed with discrete woodlands.*
  - *Transition between coastal and tidal river waterscapes, with many boats and ships emphasizing the marine character.*
  - *Medieval settlements at the heads of creeks with strong vernacular of slate with render, painted pink, cream or white with frequent medieval churches. Linear villages occur along main transport routes on the valley floors with some larger urban and industrial areas.*
  - *Tree lines linking villages, farms and cottages and forming tunnels.*
  - *A busy landscape with much movement of people between the urban centres and lots of river traffic. [1]*

*Value*

7.7.30 The value of CA 13 Fal Ria, Truro and Falmouth is summarised in Table 7-3.

**Table 7-4 Landscape Character summary within CA 13 Fal Ria, Truro and Falmouth**

Characteristic	Description	Value
Landscape designations	St Clement AGLV Small part of CWD WHS – A6i Gwennap Mining District (5%)	High
Landscape elements	Steep, winding river valleys extending from tidal riverbeds up to inland plateaus. On the slopes, a mixture of arable land and extensive tree cover, with many Cornish hedges is found.	Medium
Quality and condition	Generally good, but the expansion of larger urban areas and activity on the river corridors have impacted on the tranquillity of the surrounding areas. An increase in infrastructure such as wind turbines have had a negative impact also.	Medium
Cultural/Social characteristics	Most recreational activity found is associated with the waterways. Some evidence of the historic nature of settlements	Medium
Heritage	Medieval Farmland (High value - 50%), Settlement (Medium value - 10%), Post-medieval Enclosed Land (High value - 10%), Intertidal and inshore water (Medium value - 5%), Ornamental (Medium value - 5%), Plantations and Scrub (Low value - <5%), Upland Rough Ground (High value - <5%).	Medium
Perceptual and aesthetic	A sense of enclosure on the wooded slopes which gives way to a landscape of openness and contrast in the river valleys. The area between Truro, Blackwater, and Redruth, receives medium and higher levels of light at night. However, some of the more rural areas, especially towards the Fal Ria and the eastern coast have intrinsically dark night-time character.	Medium

7.7.31 Overall Value is **medium** of **local** importance

*Susceptibility*

7.7.32 The quality and condition of the landscape is generally good, but is increasingly subject to pressures from urban development, industrial farming practices, and higher transport volumes. Susceptibility to change of the type proposed is **medium**.

*Sensitivity*

7.7.33 Combining this receptor's medium value with its medium susceptibility to change, its setting is assessed as having a **Moderate** sensitivity to change.

### CA 14 Newlyn Downs

7.7.34 For reference, Viewpoints 3 - 28 are within this CA.

7.7.35 A plateau forming a 'spine' along the length of much of Cornwall, with an open aspect and gently undulating topography. The higher ground results in an open and exposed landscape where there are few mature trees and while there are many low Cornish hedges and hedgerows, which have been closely flailed. The views are elongated and extend outwards to the coast and to the north. The A30, a key route since prehistory, follows the ridge of higher ground, running roughly east to west. Settlement is patterned into small nucleated villages, scattered individual farms, including some estate farms. Tumuli are prominent, there is a significant area of Lowland Heathland at Newlyn Downs, and windfarms are prominent at Carland Cross and Four Burrows. At the southern end of the CA, the landscape transitions into the river valleys of CA 13 Fal Ria, Truro, and Falmouth.

7.7.36 Key relevant characteristics (as defined by the Cornwall and Isles of Scilly Landscape Character Study and confirmed by field work) are:

- *Open, gently undulating plateau with shallow valleys, incised with minor river valleys. In the north, these reach the coast.*
- *Medium to large-scale broadly rectilinear fields of pasture or arable.*
- *Low Cornish hedges and hedgerows.*
- *Significant area of Lowland Heathland at Newlyn Downs and along the coast between Perranporth and St Agnes.*
- *Woodland cover more prevalent in valleys, mainly broadleaved with Wet Woodland with limited mixed plantations.*
- *Dispersed settlement clusters with estate farms. Some nucleated settlements around enlarged medieval churchtowns.*
- *Prominent barrows on higher ground, numerous late prehistoric defended / enclosed farmsteads (rounds) and mining remains in the west.*
- *A30 along the higher ground with associated development (roadside settlements).*
- *Windfarms at two sites along the ridgeline.*
- *Long views to the north and the coast. [1]*

Value

7.7.37 The value of CA 14 Newlyn Downs is summarised in Table 7-3 below.

**Table 7-5 Landscape Character summary within CA 14 Newlyn Downs**

Characteristic	Description	Value
Landscape designations	Cornwall AONB – St Agnes Section (15%) CWDM WHS – St Agnes (10%) St Clement AGLV	High
Landscape elements	Open and exposed plateau with a central ridge, along which the A30 runs. Some vegetation cover, mostly closely flailed Cornish hedges with small pockets of woodland and larger areas of heathland. Infrastructure such as wind turbines are particularly prominent along the A30.	Medium
Quality and condition	While farmland is often in good condition, woodland is often lacking in good	Low

Characteristic	Description	Value
	management and village extensions into new developments lower the overall quality of design.	
Cultural/Social characteristics	Newlyn Downs – Open Access Land A30 a route since pre-history Series of barrow cemeteries along ridge	Medium
Heritage	Medieval Farmland (High value - 50%), Post-medieval Enclosed Land (High value - 20%), Settlement (Medium value - 5%), Industrial (Low value - 5%), Upland Rough Ground (High value - <5%), Ornamental (Medium value - <5%), Plantations and Scrub (Low value - <5%), Woodland (deciduous) (Medium value - <5%), Recreational (Low value - <5%).	High
Perceptual and aesthetic	Long views available from the windswept upper levels of the plateau. While the historic villages often retain a pre-modern character and the countryside feels very rural, new development and wind farms are both prominent and detract from the sense of place and level of tranquillity. The night-time character of this area is largely intrinsically dark with isolated areas of low district brightness. However, there are areas at Zelah, Carland Cross, Mitchell and Summercourt which have low district levels of light.	Medium

Overall, the value of this CA is judged to be **medium** and of **local** importance

#### *Susceptibility*

- 7.7.38 The quality and condition of the landscape are generally good. The quality of newer developments in and around villages is frequently poor and detracts from the character and sense of place. A higher level of management of woodland is needed. Human intervention is highly evident in the landscape, particularly through the energy and transport infrastructure along the central ridge. Susceptibility to change of the type proposed is **medium**.

#### *Sensitivity*

- 7.7.39 Combining this receptor's medium value with its medium susceptibility to change, its setting is assessed as having a **Moderate** sensitivity to change.

#### Landscape designations

- 7.7.40 There are a number of designations within the 5km study area. Two areas of the Cornwall and West Devon World Heritage Site (CWD WHS): one directly adjacent to the scheme. At the St Agnes coast, the second CWD WHS site is found, as well as the St Agnes section of the Cornwall AONB, and the 7 St Agnes section of the Heritage Coast. To the southeast of the scheme lies the St Clement Area of Great Landscape Value (AGLV). Near the centre and just to the north of the scheme is Chiverton Park, a Grade II Registered Park and Garden (RPG).

- 7.7.41 These designations largely reflect the industrial and mining history of the region, the coast's natural beauty and less common estate features.

*Cornwall and West Devon World Heritage Site*

- 7.7.42 The CWD WHS comprises a number of distinct areas over the two counties. The landscape character generally reflects the pattern of small-scale mine workings, with small fields, dense hedgerows, and narrow, winding lanes. This is particularly true for component area A6i Gwennap to the southwest of Chiverton Cross (see Volume 6 Document Ref 6.3 ES Figure 7-2). At the coast, and in the more open, southern areas of A6i Gwennap, a more desolate, exposed, and raw landscape is found, with large engine houses rising up as dramatic features.

- 7.7.43 The setting of the CWD WHS is unusual for a WHS:

- 7.7.44 'For many WHSs, the setting can be geographically demarcated as a formal buffer around the edge of the Site. However, the Nomination Document concluded that this approach was not appropriate for this site because of the diverse range of risks, its fragmented nature across ten areas, most of which are visible from one another, and the many individual monuments and other areas of mining landscape which lie outside the inscribed areas.' (Cornwall and West Devon Mining Landscape World Heritage Site Supplementary Planning Document, 2017, pp31)<sup>36</sup>

*A6i Gwennap Mining District*

- 7.7.45 The portion of the WHS which falls within the 1km study area is A6i Gwennap Mining District.
- 7.7.46 Gwennap was once described as the 'richest square mile in the Old World'. The widespread and devastating landscape impact of copper mining may be seen together with remains of the network of railways that linked the mines to the ports.
- 7.7.47 The desolate, largely heathland landscape, considerably modified by mining, is carpeted with waste rock (deads), dotted with islands of consolidated building remains, and with shafts surrounded by distinctive Cornish mine hedges. The central and northern sections of this Area are notable for their well-preserved landscape of smallholdings, interspersed with small mining settlements together with the mines which they served.' (World Heritage Nomination Document, 2006, pp100)<sup>37</sup>.

*'This is another huge Area, whose boundaries are always too far distant for one to be able to get a feeling of the whole from within, and whose identity and boundaries are not readily distinguishable from outside it. There are many small valleys, narrow lanes bounded by high hedges and here and there the occasional patch of woodland, so views are often constrained and local, often along valleys.'* (The Outstanding Universal Value (OUV) of the Cornwall and West Devon Mining Landscape World Heritage Site Area Descriptions (A1 to A10), n.d., pp33)<sup>38</sup>.

- 7.7.48 An area of contrasts, this, once the richest of Cornwall's mining districts and the site of some of its earliest beam engines, appears at first sight to have returned to

<sup>36</sup> Land Use Consultants, "Cornwall and West Devon Mining Landscape World Heritage Site Supplementary Planning document," 2017.

<sup>37</sup> United Nations Educational Scientific and Cultural Organisation (UNESCO), "Nomination of the Cornwall and West Devon Mining Landscape for inclusion on the World Heritage List," 2006.

<sup>38</sup> Cornish Mining World Heritage, "The Outstanding Universal Value (OUV) of the Cornwall and West Devon Mining Landscape World Heritage Site: area descriptions (A1 to A10)," n.d..



post-industrial rural sleepiness. Its northern half, once the site of a huge expanse of downland but subsequently laid out as smallholdings, now feels mature, the boundaries of many of its tiny fields planted with oaks and hawthorns.’ (ibid, pp35)

- 7.7.49 The value of the A6i Gwennap section of the CWD WHS is of high value with international importance. Although close to the scheme, the self-contained nature of the area, along with its restricted views result in a moderate level of susceptibility to changes of the type proposed in its setting. The designation is considered to have **high** sensitivity.

#### *A7 St Agnes*

- 7.7.50 A coastal mining area, with the use of some sites dating back to prehistory. Steep cliffs, some of which themselves were mined, now contain heathland, which has covered the scarring of the industrial activities, and engine houses rising dramatically upwards. Largely contiguous with the St Agnes Cornwall AONB. Refer to section below for a more general description of landscape.
- 7.7.51 The value of the A7 St Agnes section of the CWD WHS is of high value with international importance. The northward focus on the coastal landscape and seaward views, away from distant detracting infrastructure inland, result in the setting of this area having a medium level of susceptibility to change of the type proposed. The wider inland setting to the south of this designation is considered to have **high** sensitivity to change.

#### *Cornwall Area of Outstanding Natural Beauty (AONB) – St Agnes*

- 7.7.52 The St Agnes section of the Cornwall AONB comprises a narrow strip of land along the coast and is the smallest section of the AONB as a whole. The landscape is open and exposed with sparse vegetation and relatively expansive views from St Agnes Beacon. The existing A30 forms a part of the landscape features clustered along the ridge in the centre of the peninsula. The broad expanse of the view is the dominant characteristic of the view. The road is a relatively indistinct element within this panorama.
- 7.7.53 ‘The dominant feature of this area is large granite intrusion that forms the distinctive St Agnes Beacon, which rises from the surrounding undulating coastal plateau (formed of slate kills) to a height of approximately 90 metres above sea level.’<sup>39</sup>
- 7.7.54 St Agnes Local Policy SA5.07: ‘Seek protection of the setting of St Agnes Beacon by conserving the extent and character of the surrounding farmland for example between it and the existing settlement edge of St Agnes, Goonvrea and smaller groupings of dwellings, in order to protect the landscape integrity of this key landscape feature.’ (Cornwall AONB Management Plan Local 2016 – 2021, 2016, pp27)<sup>40</sup>
- 7.7.55 The value of this portion of the Cornwall AONB is of high value with national importance. The northward focus on the coastal landscape and seaward views, away from distant detracting infrastructure inland, result the setting of this area having a medium level of susceptibility to change of the type proposed. The wider

<sup>39</sup> Cornwall AONB Unit, “Cornwall Area of Outstanding Natural Beauty - local,” n.d..

<sup>40</sup> Highways Agency, “The DMRB Volume 11: Section 2, Part 5, Assessment and Management of Environment Effects.,” August 2008.



inland setting to the south of this designation is considered to have **high** sensitivity to change.

*Heritage Coast – 7 St Agnes*

- 7.7.56 Eleven kilometres in length, 12km<sup>2</sup> and largely contiguous with the St Agnes section of the Cornwall AONB. Refer above for the description of the landscape.
- 7.7.57 The value of this portion of the Heritage Coast is of high value with national importance. The northward focus on the coastal landscape and seaward views, away from distant detracting infrastructure inland, result the setting of this area having a medium level of susceptibility to change of the type proposed. The wider inland setting to the south of this designation is considered to have **high** sensitivity to change.

*Area of Great Landscape Value (AGLV)*

- 7.7.58 Cornish hedges and narrow wooded valleys to the north and east of Truro. This landscape forms a contrast with the more open and sparsely treed surrounding landscape.
- 7.7.59 The value of this AGLV is of high value with regional importance. The distance from the site and the lack of outward visibility reduces the importance of the setting of this area result in a medium level of susceptibility to changes to its setting. The setting of the AGLV is considered to have **moderate** sensitivity to change.

*Chyverton Registered Park and Garden (RPG) (List Entry: 1000512)*

- 7.7.60 Grade II, approximately 58ha, bounded by unclassified local roads. Historic entrance was from the south-east, by the mid - late 19th Century lodge. Current entrance is from the south-west. Not open to the public.
- 7.7.61 'A late C18 park developed as pleasure grounds from the mid C19th, with a C20th woodland garden'<sup>41</sup>.
- 7.7.62 The value of this RPG is of high value with national importance. Although this is not a robust landscape, the inward focus of the RPG and the strong visual containment from dense woodland throughout and at its edges result in a low level of susceptibility to change to its setting. The setting of Chyverton Park RPG is considered to have **moderate** sensitivity.

*Heritage assets*

- 7.7.63 The significance and settings of listed buildings and listed places has been considered in **Cultural heritage** (Volume 6 Document Ref 6.2 ES Chapter 6).
- 7.7.64 Heritage assets are valued landscape features. The extent to which Listed Buildings and Scheduled Monuments contribute to the cultural and historic aspects and overall character of the landscape is considered in the baseline assessment of sensitivity of the landscape character area receptors.

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<sup>41</sup> Natural Resources Wales, "LANDMAP Methodology: Guidance for Wales Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines," 2013.

- 7.7.65 Landscape effects including those resulting from changes to the settings of heritage assets are considered under landscape character effects below.
- 7.7.66 The potential for effects on the visual amenity of people enjoying views from publicly accessible heritage assets has been considered in the visual assessment. The listed buildings and scheduled monuments considered in the visual assessment are listed in Table 7-6.

#### Local landscape along the scheme

7.7.67 This section describes the features and characteristics of the landscape and its overall character in four distinct sections along the scheme.

- Chiverton Cross to Roscarnick within CA 11
- Roscarnick to Tresawsen within CA 14
- Tresawsen to Zelah within CA 14
- Zelah to Carland Cross within CA 14

#### *Chiverton Cross to Roscarnick*

- 7.7.68 Although this part of the scheme is within the highly valued and sensitive Redruth, Camborne and Gwennap Landscape character area (CA 11) it is not within any designated sites and does not conform well to the features, characteristics and character elsewhere in the CA. Modern and incoherent built form and road infrastructure with associated lighting, and signage is already prominent in the landscape around Chiverton Cross.
- 7.7.69 Mature deciduous tree cover is prominent in and immediately surrounding this part of the scheme at Chiverton Cross and Three Burrows. These mainly comprise belts and blocks of woodland planting and soft hedgerows associated with the existing A30 and A3075. Field boundaries are a mixture of soft and Cornish hedgerows.
- 7.7.70 The proposed Chiverton Junction sits within two large open fields of pasture bound to the north by a long, curved Cornish hedgerow. To the north of this, the landscape character changes to a more enclosed landscape of small irregular fields of pasture bound by overgrown hedgerows, more in keeping with CA 11.
- 7.7.71 To the eastern end of this part of the scheme near Roscarnick, the tower of Grade II listed St Peters Church can be noticed above the trees at Chiverton Cross.
- 7.7.72 This part of the scheme does not include any landscape designated sites, but does comprise a small part of the setting of the nearby WHS. Detracting features are prominent and there is a strong human influence in the landscape. Cultural heritage is present in the form of the church tower, but not a strong contributing factor to overall character. The value of this landscape is medium and of local importance. Its susceptibility to the introduction of new road infrastructure is reduced to medium by the presence of existing infrastructure and the lack of conformity to the character of the adjacent landscape. The sensitivity of the landscape in this part of the scheme to change is **Moderate**.

*Roscarnick to Tresawsen*

- 7.7.73 This part of the scheme is within and conforms well to the character description of CA 14 Newlyn Downs. The undulating plateau is predominantly laid to large scale regular and predominantly arable fields bound by low but intact typically Cornish hedgerows. The landscape has a large scale, open and exposed feel. Humanising elements are prominent in the form of the existing A30, wind farms and solar parks near the ridge.
- 7.7.74 Four Burrows is a prominent group of four Bronze Age barrows positioned on a local high spot with commanding views southwest to Chiverton Cross, northwest to St Agnes Head and north east to Penhallow and Callestick.
- 7.7.75 This is not a designated landscape although the proximity of the scheduled Four Burrows barrow group does increase the importance of the landscape locally. The landscape in this part of the scheme is of medium value and local importance. The large scale and open nature of this landscape along with the prominence of humanising elements mean that the landscape can accommodate change and is considered to have a medium susceptibility to change. Combining the medium local value with a medium susceptibility, the landscape in this section of the scheme is **moderately** sensitive.

## Tresawsen to Zelah

- 7.7.76 This part of the scheme dips into a shallow saddle forming an area of undulating plateau punctuating the ridge either side. The character of the landscape conforms more to the enclosed wooded valleys type described within the Newlyn Downs CA 14. The pattern of the landscape is one of small to medium irregular fields of pasture bound by a mixture of Cornish and soft hedgerows, many of which are overgrown. The landscape is more enclosed and sheltered than the open exposed ridge to the east and west.
- 7.7.77 Substantial areas of woodland along this part of the scheme, which comprise notable valued landscape features include the following:
- Mature trees either side of the existing A30 at Tresawsen;
  - A wind-sculpted oak copse at Nanteague, diagonally opposite Town and Country Motors;
  - Woodland to the south of the A30 at Marazanvose;
  - Chyverton Park RPG;
  - Woodland around the overbridge at Tolgroggan
  - Woodland at Church Lane where it crosses the existing A30 south of Zelah; and
  - Mature tree lined lane south of the existing A30 at Trevalso.
- 7.7.78 With the exception of Chyverton Park RPG, this is not a landscape designated for any particular value. Detracting elements include a large solar park at Nanteague, Town and Country Motors, a 132Kv pylon mounted electricity line near Chyverton Park, junctions, underpasses and overbridges along the existing A30. The landscape in this part of the scheme is of medium value and local importance. The enclosed nature of this landscape along with the prominence of humanising elements mean that the landscape can accommodate change and is considered to have a medium susceptibility to change. Combining the medium local value with a medium susceptibility, the landscape in this section of the scheme is **moderately** sensitive.

## Zelah to Carland Cross

- 7.7.79 To the east of Zelah the landscape opens out to become more typical of the open exposed and large scale Newlyn Downs CA 14. Impressive panoramic views extend to the south from several locations to the east of Zelah between Carland Quarry and Carland Cross, the Scheme transfers to the north of the ridge and the distant views become northerly. The field pattern tends to comprise small to medium irregular fields of pasture bound by low Cornish and soft hedges. To the east, nearer Carland Cross and Newlyn Downs, fields are slightly larger and become predominantly arable.
- 7.7.80 Notable valued landscape elements along this section include the coniferous garden trees at Pennycomequick and the pine woodland around Carland Quarry forms a prominent landmark at the high point near Carland Cross. An extensive Barrow cemetery is spread across the ridge around Carland Cross. Detracting features include box Heater Junction on the A30, varied and incoherent dwellings dotted along the A30, the prominent large wind turbines at Newlyn Downs, and the lit A30/A39 junction and service station at Carland Cross.
- 7.7.81 This is not a designated landscape although the proximity of the scheduled barrow group as well as the heathland and Open Access Land at Carland Cross do increase the importance of the landscape locally. The landscape in this part of the scheme is of medium value and local importance. The large scale and open nature of this landscape along with the prominence of humanising elements mean that the landscape can accommodate change and is considered to have a medium susceptibility to change. Combining the medium local value with a medium susceptibility, the landscape in this section of the scheme is **moderately** sensitive.

**Table 7-6 Summary of landscape sensitivity**

<b>Receptor</b>	<b>Sensitivity</b>
<b><i>Direct effects on the local landscape</i></b>	
Chiverton Cross to Roscarnick	Moderate
Roscarnick to Tresawsen	Moderate
Tresawsen to Zelah	Moderate
Zelah to Carland Cross	Moderate
<b><i>Direct effects on CA's</i></b>	
CA 11 – Redruth, Camborne, and Gwennap	High
CA 14 – Newlyn Downs	Moderate
<b><i>Indirect effects on settings of CA's</i></b>	
CA 12 – St Agnes	Moderate
CA 13 – Fal Ria, Truro and Falmouth	Moderate
<b><i>Indirect effects on settings of Landscape Designations</i></b>	
CWD WHS – A6i Gwennap Mining District	High
CWD WHS – A7 St Agnes	High
Cornwall AONB – St Agnes	High
Heritage Coast – 7 St Agnes	High
St Clement Area of Great Landscape Value (AGLV)	Moderate
Chyverton Registered Park and Garden (RPG)	Moderate

### **Visual receptors**

- 7.7.82 The undulating topography limits visibility of the scheme from the wider landscape. Open views of the scheme are generally restricted to within 200m of the scheme, while the occasional more distant view is assessed within 1km of the site and a single view from elevated ground at St Agnes Head 5km away.
- 7.7.83 The desk based study and site visit have identified the following visual receptors, which may be affected by the scheme.

#### Residential receptors

7.7.84 Nearby residents, in particular:

- Callestick Vean (south) (VP 6);
- Creegmeor Farm (VP 7);
- Nanteague Farm (VP 10);
- Marazanvose (VP 12);
- Nancarrow Farmhouse (NFH) (VP 14);
- Chyverton Lodge (VP 16);
- Polstain Farm (VP 20);
- Zelah Hill Cottage, Mount Pleasant, and Tregorlands (VP 21);
- Pennycomequick (VP 23);
- Journey's End, Racland House, and Four Winds (VP 24);
- Within Silverwell (VP 30); and
- Ennis Farm and Higher Ennis Farm (VP 31).

7.7.85 For this assessment, it has been assumed that views from these dwellings are of high individual or community value depending on whether the receptor is single dwelling or a small group of dwellings representing a community. The nature of these views is rural, but often impinged upon by infrastructure, such as the existing A30, wind turbines, and photovoltaic farms. These receptors are therefore considered moderately able to accommodate change and are therefore of medium to high susceptibility to change. The sensitivity of these receptors to changes in their views is assessed as **high**.

7.7.86 A number of residential receptors were considered during the early route options assessment phase to accommodate consideration of two possible scheme alignment variations. Since the selection of the preferred alignment, the list of receptors was revised and the following were scoped out of this ES due to intervening screening or topography, the distance to the scheme and the consequent lack of potential for significant effects from the scheme:

- Three Burrows;
- Roscarnick Farm;
- Fourburrow Farm;
- Pendale Farm;
- Callestick Vean (north);
- Tresawsen/Little Tresawsen;
- Hill house
- Residential properties in Zelah;
- Herver Cottages;
- Penglaze; and
- Rosehill Farm, Rosehill Bungalow, and Carlean.

#### Recreational receptors

7.7.87 These include users of the public recreational routes (footpaths, Bridleways, Byways and National Cycle Network routes (NCR) and open space land, in the following locations:

- Users of bridleways 301/10/1 & 301/10/3 (VP 1);
- Users of byway 314/66/1 (VP 5);
- Users of bridleway 314/64/1 (VP 6);
- Users of bridleway 309/3/1 (VP 9);
- Users of footpath 314/67/1 (VP 11);
- Users of footpath 319/16/1 (VP 15);
- Users of bridleway 319/9/1 (VP 17);
- Users of footpath 319/8/1 (VP 18);
- Users of the undesignated footpath near Church Lane (VP 19);
- Cyclists and other users of using NCR 32 near Herver Lane (VP 20);
- Cyclists and other users of NCR 32 near the B 3285 (VP 22);
- Users of footpath 324/10/1 (VP 25);
- Walkers and other recreational users of open space land at Newlyn Downs (VP 25 and 26);
- Walkers and other recreational users of open space land at Carland Quarry (VP 27);

- Pedestrians using footpath 318/63/2 and pedestrians and equestrians using bridleways 318/63/1 & 318/63/3 (VP 29) within the Cornwall AONB, the Heritage Coast, and open space land.

7.7.88 These receptors are located in rural or village contexts, and scenic enjoyment of the wider landscape is an important part of the recreational value. The value of their visual amenity is considered to be high and local in most cases, with the exception of NCR route 32 and people on routes within the AONB, which are of National Value. Due to their engagement with the landscape as a part of the recreational experience, these recreational receptors can accommodate a low level of change and are considered to have moderate susceptibility to change. The NCR 32 route and people on routes within the AONB are therefore assessed as having a **high** sensitivity to change. All other recreational receptors are assessed as having a **moderate** sensitivity to visual change.

#### Transport receptors

7.7.89 Receptors include users of the road network, in particular:

- Users of the Blackwater Bypass of the A30 (VP 1);
- Users of services at Chiverton Cross (VP 2);
- Users of the A3075 near Trevissome Business Park (VP 3);
- Users of the A30 near Four Burrows (VP 4);
- Users of the local road near Callestick Vean (south) (VP 6);
- Users of the B3284 near Chybucca (VP 8);
- Users of the existing A30 near Marazanvose (VP 12);
- Users of the local road near Chyverton Park (VP 16);
- Users of the existing A30 (VP 19);
- Users of High Road and Henvor Lane (VP 20);
- Users of the existing A30 near Zelah Hill (VP 21);
- Users of the B3285 and the existing A30 (VP 22);
- Users of the existing A30 near Newlyn Downs (VP 24);
- Users of the local road near Cargoll Farm (VP 28);
- Users of the local road near Silverwell (VP 30);
- Users of the locally designated Quiet Lane near Higher Ennis Farm (VP 31);  
and
- Users of the typical minor rural lanes in the area.

7.7.90 The attention of most of these receptors will be absorbed with navigating the narrow country lanes or busy A and B roads. The value of the visual amenity of these receptors is low, and their susceptibility to change is low. The visual amenity of these receptors is considered to have a **low** sensitivity to change.

7.7.91 The value of the local road near Higher Ennis Farm (VP 31) is considered to be of moderate value to users, due to its designation as a Quiet Lane (designated under *The Quiet Lanes and Home Zones (England) Regulations 2006*, to make identified minor rural roads more attractive for all types of users whilst at the same time discouraging excessive use by vehicles). Its susceptibility to change is medium. The visual amenity of these receptors is considered to have a **moderate** sensitivity to change.

### Employment receptors

- 7.7.92 There are indoor employment receptors along the route such as workers in Trevisson Business Park (VP 3) and those at Town and Country Motors. While these are adjacent to the countryside, their immediate surroundings are already dominated by existing roads. Workers are unlikely to be focussed on enjoyment of views of the landscape. The value of their visual amenity is low and of individual or community importance and views are able to accommodate change. Their sensitivity to change in views is **Low**.
- 7.7.93 Outdoor employment receptors such as farms and small businesses are commonly found across the Study Area, for example at Hill View Farm (VP 8), NFH (VP 15), and Ennis Farm (VP 31). These receptors are more likely to take in the views of the countryside. The value of their visual amenity is medium and views are less able to accommodate change, resulting in a medium susceptibility. Their sensitivity to change in views is **Moderate**.

### Visitor accommodation

- 7.7.94 There are users of holiday accommodation in several locations within the study area. Those with the potential to receive visual effects are located at NFH, very near the existing A30. The visual focus of these receptors is likely to be internal to the grounds of the holiday accommodation sites. These receptors are of medium local value and their settings have a medium to high susceptibility to change in their views. Their sensitivity to change in views is **Moderate**.

### Heritage assets

- 7.7.95 The visual amenity of people enjoying views to and from the following publicly accessible heritage assets is represented by viewpoints as set out in Table 7-7:

**Table 7-7 Heritage receptors included in this assessment**

Heritage asset	Representative viewpoints
Cornwall and West Devon Mining World Heritage Site (CWDM WHS) - A6i Gwennap Mining District	VP 1
Scheduled Monument – Four Burrows Barrow Cemetery (List Entry: 1016054)	VP 4
Scheduled Monument – Bowl Barrow (List Entry: 1016105)	VP 5
Scheduled Monument – Bowl Barrow (List Entry: 1016103)	VP 6
Listed Building – Nancarrow Farmhouse and attached wall (Grade II) (List Entry: 1136610)	VP 14
Listed Building – Lodge and associated walls and gate posts at entrance to Chyverton House, Registered Park and Garden (Grade II) (List Entry: 1136926)	VP 16
Scheduled Monument – Barrow Cemetery at Carland Cross (List Entries: 1016888, 1017050, 1020758)	VP 26, VP 27
Scheduled Monument – Bowl Barrow (List Entry: 1016443)	VP 29
Cornwall and West Devon Mining World Heritage Site (CWDM WHS) – A7 St Agnes	VP 29
St Agnes Heritage Coast	VP 29



- 7.7.96 According to the DMRB criteria (set out in **Cultural heritage** (Volume 6 Document Ref 6.2 ES Chapter 6), Table 6-2), the visual amenity of people enjoying views:
- to and from the Cornwall and West Devon Mining World Heritage Site (CWDM WHS) are considered to be of **high** international value;
  - scheduled monuments to be of **high** national value; and
  - Grade II listed buildings to be of **medium** local value.
- 7.7.97 Given the rural context and the presence of the existing A30 and other infrastructure, the visual amenity of all of these receptors is considered to be of **medium to high** susceptibility to change of the type proposed. Combining the respective values with medium susceptibility, the sensitivity to change of the receptors is assessed as follows:
- CWDM WHS and scheduled monuments as **high** sensitivity; and
  - Grade II listed buildings as **moderate** sensitivity.
- 7.7.98 During field work, the Grade II Listed Church of St Peter (List Entry: 1141481), Vicarage (List Entry: 1328719), and Schoolroom (List Entry: 1141482) were visited and no views of the scheme were found to be available from within their curtilages. Effects on the significance and setting of this and other heritage assets is covered in **Cultural heritage** (Volume 6 document Reference 6.2 ES Chapter 6).

#### **Assessment viewpoints**

- 7.7.99 The following 29 viewpoints (VPs) have been selected to represent the visual receptors included in this assessment. For the location of the viewpoints refer to Volume 6 Document Ref 6.3 ES Figure 7-1, Visibility and Viewpoints.

**Table 7-8 Baseline assessment of viewpoints**

VP	Description and location	Existing view	Receptors represented	Sensitivity
1	View from overbridge south of Three Burrows, looking northeast along A30, 20m southwest of the scheme.  SW 74417 46252	A partially enclosed medium distance view looking northeast along the A30 towards Chiverton Cross. The dual carriageway of the A30 through the middle of the frame, dominates the view. Embankments on either side of the road frame the view, while shrub and woodland vegetation on the bordering fields filter views of the surrounding area. Beyond the trees, glimpses of one and two storey buildings can be seen. In the distance, Carland Cross is discernible due to the cluster of street lighting. To the southeast, a wind turbine rises above the treetops.	Users of bridleways 301/10/1 & 301/10/3 enjoying the visual setting of the heritage asset – CWDM WHS A6i Gwennap Mining District	Views to and from the WHS is of very high value. However, the proximity to the A30, diminishes the sense of place and the connection with the landscape. This results in a medium susceptibility to change and therefore the visual amenity of these receptors is considered to be of high sensitivity to change.
			Transport receptors along the Blackwater Bypass of the A30	The visual amenity of users of the existing A30 is considered to be of medium value. While panoramic views of the surrounding countryside are available from the A30, the driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and therefore their visual amenity is considered to be of low sensitivity.
2	View from Starbucks at Chiverton Cross, looking east towards A30, 10m west of the scheme.  SW 74690 46882	This is a filtered view looking east towards the Chiverton Cross roundabout along the A30. The foreground of the view is occupied by the edge of the Services' carpark, and the wooden pail fencing separating it from the A30. Amenity grass and shrub planting surrounds the entrance ramp leading up to the Starbucks. Starbucks itself is screened from view by a taller wooden pail fence with a brick footing. In the middle-distance, the view is dominated by road infrastructure, including signage, lighting, and traffic. In the middle of the frame, further views out to the surrounding countryside are screened by the roadside woodland within the	Users of services at Chiverton Cross	The visual amenity of users of the Chiverton Cross Services is considered to be of medium value. Due to the highly built up nature of the complex and the location next to the A30, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.

VP	Description and location	Existing view	Receptors represented	Sensitivity
		roundabout. On the western side of the frame, the beginning of the A390 is visible.		
3	View from Trevisson Business Park looking west, 60m southeast of the scheme.  SW 75364 47767	An open view looking west from the entrance to Trevisson Business Park, along the A3075. An unmanaged hedgerow borders the north side of the A3075, filtering the view into the large field beyond. On the horizon, a number of small holdings, isolated trees and patches of hedgerows are visible. A number of pylon and overhead power lines interrupt the view. To the west of the frame, Grade II Listed St Peter's Church is visible as a prominent landmark.	Workers at Trevisson Business Park  Transport receptors using the A3075 near Trevisson Business Park	The views from the business park are available to workers in westerly facing rooms and are of community value. The focus of these receptors is unlikely to be on enjoyment of views from the surrounding landscape. These are of low local value. There is a medium susceptibility to change and thus the visual receptors are of low sensitivity to change.  The visual amenity of users of the A3075 road is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of navigating the busy roads, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity to change.
4	View from Four Burrows, looking northwest, 130m south of the site.  SW 76153 48254	A wide, open view from a local high point on the existing A30 towards open fields. In the foreground. Large barrows are noticeable on either side of the road, while a low hedgerow with occasional trees partially filter views beyond. To the west, beyond the hedgerow the view is very open and wide extending to the Grade II Listed St Peter's Church on the skyline 1.8km to the southwest and St Agnes Beacon 5km to the northwest. Wind turbines are prominent in the middle distance.	Road users enjoying the views across the landscape, within which the tower of Grade II listed St Peter's Church and the nearby– Four Burrows Barrow Cemetery (1016054) can be seen.	The views to and from heritage assets are of high value. In the context of the surrounding infrastructure, these views have a medium susceptibility to change, and therefore a high sensitivity to change.

VP	Description and location	Existing view	Receptors represented	Sensitivity
5	View from byway leading to Higher Callestick Farm, looking southeast towards A30, 800m north of the scheme.  SW 76589 49409	An open view looking southeast across a mosaic of large fields. A wind turbine is prominent in the foreground, while in the middle distance, a line of pylons crosses the view below the skyline.. Hedgerows and small copses of woodland border the fields. In the middle of the view, the existing A30 can be seen just below the skyline in the distance. The upper portions of cars are barely perceptible, while high sided vehicles are more noticeable. The road is screened by topography at either side of the view. In the background there are several wind turbines on the eastern side, visible above a block of woodland.	Users of Byway 314/66/1	The views of users of the Byway have high local value. In the context of the rural setting with the proximity of the A30 and other infrastructure, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.
			People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016105)	The views to and from heritage assets are of high value. In the context of the surrounding infrastructure, these views have a medium susceptibility to change, and therefore a high sensitivity to change.
6	View from the junction of B3284 with the bridleway 314/64/1, adjacent to the dwelling at Callestick Vean (South), looking east, 5m north of the scheme.  SW 77260 48791	An enclosed view looking east from a farm gateway, across a network of fields towards the A30. The view is framed by hedgerows at either side of the gateway. To the south, a very small portion of a road sign and the upper sections of a wind turbine are visible above the mature roadside hedgerow. The existing A30 is largely obscured from view by the mature roadside hedgerows, however HGV become clearly visible as the road reaches the ridgeline to the east.	Residential receptors at Callestick Vean (south)	Views from the private dwelling at Callestick Vean are of high value to residents. Views from within the property to the south and east, towards the B3284 and the A30, are screened by a thick hedgerow. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.
			Pedestrians and equestrians using bridleway 314/64/1	The views of pedestrians using the PRow path have high local value. In the context of the rural setting with the proximity of the A30, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.
			People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016103)	The views to and from heritage assets are of high value. In the context of the surrounding infrastructure, these views

VP	Description and location	Existing view	Receptors represented	Sensitivity
				have a medium susceptibility to change, and therefore a high sensitivity to change
			Transport receptors using the B3284 near Callestick Vean (south)	The visual amenity of users of the B3284 road is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of navigating the busy roads, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
7	View from PRoW, leading to Creegmeor Farm, looking southwest, 210m north-northwest from the scheme.  SW 77818 49127	A wide view looking southwest across a field laid down to pasture. The land rises up very slightly to end at a ridge, on which a number of mature trees are skylined. To the east, a hedgerow parallel to the bridleway frames the view. In the centre of the view, a large agricultural building is prominent, as are five wind turbines spaced across the skyline. Views of the existing A30 are screened by planting and built form.	Residential receptors at Creegmeor Farm	Views from the private dwelling at Creegmeor Farm are of high value to residents. Views from within the property to the south and west, towards the A30 are screened by planting bordering the property. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.
			Pedestrians and equestrians using bridleway 314/65/1	The views of pedestrians using the PRoW path have high local value. In the context of the rural setting with the proximity of the A30, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.
8	View from the B3284, looking west, 140m south of the scheme.  SW 78161 48749	A wide, open view west along the B3284. The road is bordered on either side by low hedgerows. To the southwest, the fields bordered by low hedgerows rise up slightly to end in a ridgeline. To the north, the land rises also, but less sharply and ends at a hedgerow edging the horizon. One wind turbine is	Transport receptors along the B3284	The visual amenity of users of the B3284 is considered to be of low value. While panoramic views of the surrounding countryside are occasionally available, the driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and

VP	Description and location	Existing view	Receptors represented	Sensitivity
		prominent in the middle distance, while a further three are spaced along the horizon. In the central far distance, St Agnes Beacon is visible.	Residential receptors at Hillview Farm	therefore their visual amenity is considered to be of low sensitivity. Views from the private dwelling at Hillview Farm are of high value to residents. Views from within the property to the west towards the B3284 and the A30, are partially filtered on the lower storey by a thick hedgerow. The visual amenity of these residents has high susceptibility to change and is thus of high sensitivity.
			Representative of views of outdoor workers at Hill View Farm	The views of outdoor workers have moderate local value. In the context of the agricultural setting, these views have a medium susceptibility to change, and therefore a moderate sensitivity.
9	View from bridleway, near Hillview, looking northeast towards A30, 60m south of the scheme.  SW 78703 49119	An open view, looking northwest across a field towards the existing A30. The view is framed to either side by hedgerows, which screen views out to the wider countryside. The land rises up slightly to form a ridge on the western side of the frame. The upper portions of higher sided vehicles become visible as the A30 emerges from behind this landform and dips down towards Tresawsen. In the centre of the frame a wind turbine is visible on the distant skyline. On the eastern side of the frame, further ridges are staggered in the middle and far distances. The landscape in the distance forms a medium-scale mosaic of fields, hedgerows and sparse trees.	Pedestrians and equestrians using bridleway 309/3/1	The views of pedestrians using the PRoW path have high local value. In the context of the rural setting with the proximity of the A30, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.

VP	Description and location	Existing view	Receptors represented	Sensitivity
10	View from outbuildings at Nanteague Farmhouse, looking southwest-west, 110m west of the scheme.  SW 79264 49487	A wide and open view across fields laid to pasture. In the foreground, the land lowers down to a hedgerow of small trees along a watercourse, before rising up on the far side to end at a further hedgerow on the ridgeline. An overhead power line is skylined along this ridge. To the north, woodland obscures views of the existing A30 although traffic moving along the A30 can be glimpsed through the intervening trees.	Residential receptors at Nanteague Farm	Views from the private dwelling at Nanteague Farm are of high value to residents. Views to the north and west from the property to the A30 are screened by vegetation. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.
11	View from PRoW east of Lower Ventongimps, looking south-southeast, 320m northwest of the scheme.  SW 79445 50213	An open view across fields towards the existing A30. The field boundaries and roadside are flanked by intact hedgerows. The upper portions of high sided vehicles can be intermittently glimpsed through the tree cover. The land rises slightly to the southwest, occluding further views in this direction. A prominent and distinctive copse of deciduous woodland in the middle of the view is prominent on the horizon. Built form around Town and Country Motors is visible on the skyline to the far right of the view.	Pedestrians using footpath 314/67/1	The views of pedestrians using the PRoW path have high local value. In the context of the rural setting with the proximity of the A30, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.
12	View from Marazanvose, looking southwest along the A30, 40m west of the scheme.  SW 79896 50332	A partially enclosed view looking southwest along the A30. The view across the A30 is foreshortened and enclosed by high hedgerows and ornamental planting on property and road boundaries. The dwellings at Marazanvose flank the north side of the A30, while a Cornish hedgerow bounds the south side of the road. Overhead power lines run along and across the length of the road. In the distance, the land rises up to a ridge, on	Residents at Marazanvose	Views from the private dwellings at Marazanvose are of high value to residents. Views to the south from the properties face directly onto the existing A30. The visual amenity of these residents has high susceptibility to change and is thus of high sensitivity.
			Transport receptors along the existing A30 near Marazanvose	The visual amenity of users of the existing A30 is considered to be of medium value. While panoramic views of the surrounding

VP	Description and location	Existing view	Receptors represented	Sensitivity
		which blocks of woodland and a large agricultural building are skylined.		countryside are available at times from the A30, the driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and therefore their visual amenity is considered to be of low sensitivity.
13	View from field within NFH, looking west towards A30, 100m southeast of the scheme.  SW 80063 50251	A wide, partially filtered view from a small field, bordered by mature deciduous hedgerow trees, beyond which an open field is partially visible. The horizon is formed by further woodland along the A30 boundary in the background.	Residential receptors at the bungalow at NFH  Users of holiday accommodation at NFH	Views from the private dwelling at the bungalow at NFH are of high value to residents. Views out from the property are filtered by planting within and on the boundary of the property. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.  Views from holiday accommodation at NFH are of medium local value. Views out from the property are filtered by planting within and on the boundary of the property. The visual amenity of these residents has medium susceptibility to change and is thus of moderate sensitivity.
14	View from NFH, looking southwest from Rose Garden towards A30, 150m east of the scheme.  SW 80117 50306	An enclosed view, framed to the north by high deciduous ornamental planting to the west of the frame, the view looks out on to open lawn with shrubs and then mature trees filtering further views of the landscape.	Residential receptors at NFH  People enjoying views to and from NFH and attached wall Grade II listed buildings (1136610)	Views from the private dwelling at NFH are of high value to residents. Views out from the property are filtered by planting within and on the boundary of the property. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.  Views to and from these listed buildings are of high value. Although currently disturbed by the proximity to the A30, the setting is relatively tranquil. This results in a medium



VP	Description and location	Existing view	Receptors represented	Sensitivity
				susceptibility to change and therefore the visual amenity of these receptors is considered to be of moderate sensitivity to change.
15	View from PRoW between A30 and NFH, looking southwest, 30m southeast of the scheme.  SW 80055 50350	A view from a PRoW, looking west through a field access gap across an open field towards the existing A30 beyond the treeline. Hedgerows with mature trees filter views beyond to the wider landscape. An overhead power line on wooden poles bisects the view.	Pedestrians using footpath 319/16/1  Representative of views of outdoor workers at NFH	The views of pedestrians using the PRoW path have high local value. In the context of the agricultural setting, these views have a medium susceptibility to change, and therefore a moderate sensitivity.  The views of outdoor workers have moderate local value. In the context of the agricultural setting, these views have a medium susceptibility to change, and therefore a moderate sensitivity.
16	View from entrance to Chyverton Park, adjacent Chyverton Park Lodge, looking southeast, 40m northwest of the scheme.  SW 80487 50913	A short view from Chyverton Park Lodge, looking southeast across the existing adjacent A30 off slip road. The view is foreshortened by unmanaged roadside hedgerows and woodland, obscuring further views to the wider countryside and the existing A30.	People enjoying the views to and from Chyverton Park Lodge and associated walls and Gateposts Grade II listed buildings (1136926)  Residential receptors at Chyverton Park Lodge	Views to and from these listed buildings are of high value. However, the proximity to the local road connecting the A30 and Zelah, diminishes the sense of place and connection between the building and the landscape. This results in a medium susceptibility to change and therefore the visual amenity of these receptors is considered to be of moderate sensitivity to change.  Views from the private dwelling at Chyverton Park Lodge are of high value to residents. Views to the southeast from within the property face directly onto the adjacent road. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.

VP	Description and location	Existing view	Receptors represented	Sensitivity
			Transport receptors along the local road near Chyverton Park	The visual amenity of users of these local roads is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
17	View from Hill House looking northeast, 10m south of the scheme.  SW 80803 50983	A view over the Hill House garden hedge looking towards the existing A30. The foreground of the view is occupied by an arable field. In the centre of the view a pole-mounted overhead power line is prominent. A post-and-rail fence with a further hedgerow define the route of bridleway 319/9/1 and foreshorten the view. The existing A30 is in cutting just beyond the hedge and is screened from view.	Pedestrians and equestrians using bridleway 319/9/1	The views of pedestrians using the bridleway have high local value. In the context of the rural setting with the adjacent A30 and other infrastructure, these views have a medium susceptibility to change, and therefore a moderate sensitivity to change.
18	View from PRow 319/8/1, near Trerice, looking northeast towards A30, 750m southeast / 1.3km southwest of the scheme.	A wide, open view looking northeast across a network of fields. The view is bisected by a low hedgerow, bordering the foreground arable field. The land slopes downwards towards the River Allen and the surrounding woodland. To the west, beyond the River, the land rises sharply up to a ridge. This land is covered in a mosaic of large fields laid down to pasture and	Pedestrians using Footpath 319/3/1	The views of pedestrians using the footpath have high local value. In the context of the tranquil, rural setting, these views have a medium susceptibility to change, and therefore a high sensitivity to change.

VP	Description and location	Existing view	Receptors represented	Sensitivity
	SW 81882 51451	bordered with orderly hedgerows and the occasional hedgerow tree. The buildings of Tolgroggan Farm and Hill House can be seen. In the background of the view to the east, a number of buildings in Zelah are visible. These are backclothed against woodland, much of it on the western side sited within Chyverton RPG. The existing A30 runs across the frame under the distant skyline, to the fore of Zelah, however is in cutting g and so not visible from this location.		
19	View from intersection of footpath near Church Lane, Zelah with existing A30, looking southwest along A30, 30m west of the scheme.  SW 81303 51885	This is a narrow view looking northeast along the existing A30. The road is sited on an embankment, on a ridge in the landscape, and is flanked by roadside woodland. Views of the surrounding countryside are therefore entirely limited to a funnelled view to the southwest, where large hedgerow-lined fields rise up to a wooded ridgeline. Road infrastructure dominates the view.	Pedestrians using the footpath near Church Lane  Transport receptors along the existing A30	The views of pedestrians using the definitive path have high local value. In the context of the existing infrastructure, these views have a low susceptibility to change, and therefore a moderate sensitivity to change.  The visual amenity of users of the existing A30 is considered to be of medium value. While panoramic views of the surrounding countryside are available from the A30, the driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and therefore their visual amenity is considered to be of low sensitivity.
20	View from the intersection of the High Road and Herver Lane, looking northeast, within the scheme.	A partially open view, looking east from the High Road, along Herver Lane. The view is framed to both the north and south by hedgerows with mature hedgerow trees. The middle of the view is occupied by a large traffic island with amenity grass to the fore and low	Residential receptors at Polstain Farm	Views from the private dwelling at Polstain Farm are of high value to residents. Views to the south from within the property are filtered by the hedgerow and woodland planting on the boundary of the property. The visual amenity of these residents has

VP	Description and location	Existing view	Receptors represented	Sensitivity
	SW 81402 52181	scrub behind. Road infrastructure dominates the view.		medium susceptibility to change and is thus of high sensitivity.
			Cyclists using NCR 32 near Herver Lane	The visual amenity of users of NCR 32 is considered to be of high value. While the attention of cyclists is partially focussed on the surrounding traffic, the slower pace at which they move along the road network, affords opportunities to appreciate views. These receptors are assessed as having a medium susceptibility to change, and therefore their visual amenity is considered to be of high sensitivity.
			Transport receptors along High Road and Herver Lane	The visual amenity of users of these local roads is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
21	View from Tregorlands, looking southeast, 60m northwest of the scheme  SW 81875 52674	A wide open view across a field, bordered by a low hedgerow. In the centre of the frame in the middle distance, scrubland and mixed coniferous and deciduous woodland are visible and act to filter further views. To the east three wind turbines are visible above the woodland. To the southeast, a series of ridges are visible, containing open fields with hedgerow boundaries. The ridgeline is marked with a series of woodland patches. In the far	Residential receptors at Tregorlands, Zelah Hill Cottage, and Mount Pleasant  Transport receptors on the existing A30 near Zelah Hill	Views from the private dwellings at Zelah Hill are of high value to residents. Views from the property are very open. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.  The visual amenity of users of the existing A30 is considered to be of medium value. While panoramic views of the surrounding countryside are available from the A30, the

VP	Description and location	Existing view	Receptors represented	Sensitivity
		distance, the hills of the St Austell china clay area are visible.		driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and therefore their visual amenity is considered to be of low sensitivity.
22	View from Honeycombe Farm, looking northeast, 50m south of the scheme.  SW 82666 52715	A partial and interrupted view looking northeast towards the existing A30. The foreground of the view is occupied by an unmanaged hedgerow forming the boundary to an unkempt field. The land rises up from the hedgerow to the northeast in a series of medium-sized fields, bordered by low hedgerows and intermittent larger stands of woodland. In the centre of the view in the distance, two wind turbines are clear rising above the ridgeline. The coniferous woodland at the disused quarry near Carland Cross is a prominent landmark on the horizon.	Cyclists using NCR 32 link on the unclassified local road	The visual amenity of users of NCR 32 is considered to be of high value. While the attention of cyclists is partially focussed on the surrounding traffic, the slower pace at which they move along the road network, affords opportunities to appreciate views. These receptors are assessed as having a medium susceptibility to change, and therefore their visual amenity is considered to be of high sensitivity.
			Residential receptors at Honeycombe Farm	Views from the private dwelling at Honeycombe Farm are of high value to residents. Views from the property are moderately open. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.
			Transport receptors on the unclassified local road near Honeycombe Farm	Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
23	View from Pennycomequick,	A narrow, enclosed view from the back entrance to Pennycomequick, looking southeast along the unclassified local road.	Residential receptors at Pennycomequick	Views from the private dwelling at Pennycomequick are of high value to residents. Views from the property are

VP	Description and location	Existing view	Receptors represented	Sensitivity
	<p>looking southeast, within the scheme.</p> <p>SW 82482 52937</p>	<p>The view is framed by mature deciduous hedgerows either side of the road, which restrict and filter views east and west into the wider countryside. The dominant element in the centre of the frame is the unclassified local road.</p>	<p>Transport receptors along the unclassified local road near Pennycomequick</p>	<p>partially filtered. The visual amenity of these residents has medium susceptibility to change and is thus of high sensitivity.</p> <p>The visual amenity of users of these local roads is considered to be of high local value, due to its local designation as a Quiet Lane. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of moderate sensitivity.</p>
24	<p>View from Journey's End, looking southeast, 110m north-northwest of the scheme.</p> <p>SW 83512 53493</p>	<p>A panoramic view looking southeast towards Carland Cross. In the fore to middle ground low scrub flanks either side of the existing A30, partially interrupting longer views beyond. Overhead power lines run from the dwelling at Journey's End and along the existing A30. Vehicles are partially visible along the A30 as it is in a slight cutting. To the east, the land continues flat to the middle distance, where two further properties are sited, just to the left of the view. Beyond these, it rises up towards a ridge, which screens views of Carland Cross. A block of coniferous woodland around the disused quarry is prominent on the skyline of this ridge. To the south, views of more distant ridges are available, containing blocks of woodland, open fields, and pylon lines.</p>	<p>Residential receptors at Journey's End, Racland House, and Four Winds</p> <p>Transport receptors along the existing A30 near Newlyn Downs</p>	<p>Views from the private dwelling at Journey's End are of high value to residents. Views from the property are very open. The visual amenity of these residents has high susceptibility to change and is thus of high sensitivity.</p> <p>The visual amenity of users of the existing A30 is considered to be of medium value. While panoramic views of the surrounding countryside are available from the A30, the driver's attention is focussed on the task of driving. These receptors are assessed as having a low susceptibility to change, and therefore their visual amenity is considered to be of low sensitivity.</p>

VP	Description and location	Existing view	Receptors represented	Sensitivity
25	View from PRoW 324/10/1 within Newlyn Downs Open Access Land, looking southeast to southwest towards A30, 1km north of the scheme.  SW 83397 54620	An open panoramic view across the heathland of Newlyn Downs. The view of open heathland with patches of scrub is framed to the east and south by ridges. To the base of the southern ridge, evidence of mine workings is just visible. The coniferous woodland at the open access land is prominent on the skyline, just to the east of the middle of the frame. Vehicles on the A30 on the southern ridge are visible, but distant, and therefore not very noticeable. The broad expanse of the landscape dominates the view, with the exception of the wind farm to the east.	Representative of views of recreational users of Newlyn Downs open space land	The long distance views from Newlyn Downs have a high local value in a recreational context. In the context of the existing infrastructure, these views have a low susceptibility to change, and therefore a moderate sensitivity to change.
			Pedestrians using footpath 324/10/1	The long distance views from Newlyn Downs have a high local value in a recreational context. In the context of the existing infrastructure, these views have a low susceptibility to change, and therefore a moderate sensitivity to change.
26	View from base of turbine at southwest corner of Carland Cross Wind Farm, looking east, 120m northwest of the scheme.  SW 84242 54008	A panoramic, but foreshortened view to the south towards the existing A30. In the foreground open fields are surrounded by scrubby vegetation. To the east of the frame, an area of hard standing beneath the wind turbine is visible. The ground slopes sharply upwards towards a ridge, where a group of conifers at the centre of the open access land are prominent on the skyline off to the right of the view. The tops of tall vehicles moving across the top of the ridge come in and out of view behind the roadside vegetation. Visibility of activity on the road is most prominent on the northeast side of the scene. At the south western end of the conifer group, the road dips behind the ridge and disappears from view.	Representative of views of walkers and other recreational users of Newlyn Downs open space land	Views from Newlyn Downs have a high local value in a recreational context. In the context of the existing infrastructure, these views have a low susceptibility to change, and therefore a moderate sensitivity to change.
27	View from Open Access heathland near the Carland Cross Barrow	An open view, with heathland dominating the foreground. The A30, situated in a slight cutting, runs across the frame, from northeast	People enjoying the views to and from nearby heritage assets – Barrow Cemetery at Carland	The views to and from heritage assets are of high value. In the context of the surrounding infrastructure, these views



VP	Description and location	Existing view	Receptors represented	Sensitivity
	Cemetery, within the scheme boundary, looking northeast.  SW 84144 53705	to southwest, partially filtered by hedgerows. Beyond the A30, the land rises up by approximately 10m ending in a slight ridge delineated by a hedgerow. On this rising land, wind turbines are prominent. In the middle distance of the view a telecommunications tower breaks the skyline with the hills of the St Austell china clay area visible beyond as a distant horizon.	Cross (1016888, 1017050, 1020758)  Representative of views of walkers and other recreational users of open space land at Carland Quarry.	have a medium susceptibility to change, and therefore a high sensitivity to change.  Users of public access land have a high local value in a recreational context. In the context of the existing road and wind farm infrastructure, these views have a low susceptibility to change, and therefore a moderate sensitivity to change.
28	View from an unclassified local road, south of the intersection with Cargoll Road, looking, southeast, 3.7km northwest of the scheme.  SW 81603 56440	An open view across a large field laid down to pasture. To the west, the field is bordered by a low hedgerow. In the centre of the view, the hedgerow bordering the south of the field forms the horizon, with the blades of several wind turbines visible beyond. The coniferous woodland near the disused quarry is a noticeable landmark on the distant horizon to the east.	Transport receptors along the unclassified local road	The visual amenity of users of these local roads is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
29	View from St Agnes Beacon looking southeast, 5km northwest of the scheme.  SW 71013 50214	A long distance wide open panoramic view looking southeast towards the scheme. Chiverton Cross and Carland Cross are visible in the view. The view is from an elevated position in public access land with a trig point offering 360 degree views over the north Cornish coast. The landscape looking inland to the south forms a small to medium scale mosaic. The towns of St Agnes and Goonbell spread into the frame from the west along the southwest side of the Trevellas Coombe River Valley. A network of hedgerows and woodland permeates the countryside to the eastern side of the frame, while the western side is more	Pedestrians using footpath 318/63/2 and pedestrians and equestrians using bridleways 318/63/1 & 318/63/3 within the Cornwall AONB, the Heritage Coast and those enjoying views to and from nearby heritage assets – Bowl Barrow (1016443), CWDM WHS A7 St Agnes.	The views of receptors using the PRoWs and enjoying heritage assets have high value. The context is relatively remote rural setting, however still has visual connection with built up areas. These views have a high susceptibility to change, and therefore a high sensitivity to change.



VP	Description and location	Existing view	Receptors represented	Sensitivity
		exposed with little tree cover. The ridgeline along which the existing A30 runs, is discernible by the wind turbine infrastructure located along its length. At the western end of the frame, the pale tower of St Peter's Church at Chiverton Cross is a prominent landmark.		
30	View from the unclassified road past properties at Silverwell and Silverdene looking southeast, within the boundaries of the scheme.  SW 75214 47887	A medium distance panoramic view. The centre of the frame is bisected by a lane bordered by hedgerows, which partially restrict the views out from the lane. Power lines run down the western side of the lane. To either side of the lane, arable fields occupy the mid-to back-ground. On the eastern side of the horizon, a wind turbine is prominent, while a more distant turbine is visible on the western side. Across the middle of the background, the rooflines of agricultural buildings and woodland can be seen. To the far right of the view the tower of Grade II Listed St Peter's Church is visible above distant trees.	Residential receptors at dwellings within Silverwell.	Views from the private dwellings at Silverwell are of high value to residents. Views from the properties are partially filtered by hedges. The visual amenity of these residents has high susceptibility to change and is thus of high sensitivity.
			Transport receptors on the local road near Silverwell.	The visual amenity of users of these local roads is considered to be of medium value. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of low sensitivity.
31	View from the minor unclassified road leading to Ennis Farm looking north, 70m south of the scheme.  SW 83750 53367	An open view across a large field laid down to pasture, which occupies the fore and middle ground. The ground rises up approximately 15m to meet the current A30, which is bordered by hedges. HGVs are visible against the skyline.	Residential receptors at Higher Ennis Farm, Sunnyside, and Ennis Farm.	Views from the private dwellings at Ennis Farm and Higher Ennis Farm are of high value to residents. Views from the properties are partially filtered by hedges. The visual amenity of these residents has high susceptibility to change and is thus of high sensitivity.
			Representative of views of outdoor workers at Ennis Farm.	The views of outdoor workers have moderate local value. In the context of the agricultural setting, these views have a

VP	Description and location	Existing view	Receptors represented	Sensitivity
		Three dwellings, Journeys End, Racland House, and Four Winds, are prominent against the skyline.	Transport receptors on the designated Quiet Lane near Ennis Farm.	medium susceptibility to change, and therefore a moderate sensitivity.  The visual amenity of users of these local roads is considered to be of high local value, due to its local designation as a Quiet Lane. Due to the limited number of viewing opportunities and the focus of the drivers' attention being on the task of driving on narrow country roads with minimal passing bays, these receptors are assessed as having a low susceptibility to change. Therefore, their visual amenity is considered to be of moderate sensitivity.

## 7.8 Consultation

- 7.8.1 The scope of the landscape and visual assessment was set out in the Scoping Report<sup>42</sup> for which a Scoping Opinion<sup>43</sup> was provided by the Planning Inspectorate.
- 7.8.2 The topic responses to the relevant comments in the Scoping Opinion are presented in **Response to scoping opinion** (Volume 6 Document 6.4 Appendix 4.2).
- 7.8.3 The relevant officers at Cornwall Council and Natural England were engaged to agree the scope of the visual assessment, the study area and the approach for the landscape assessment. The details of these discussions are set out in Table 7-5.

**Table 7-9 Consultation record**

Consultee	Date	Details	Response
Cornwall Council	11 July 2017	Phone calls and emails between Arup and Cornwall Council to initiate handover from WSP and arrange consultation meetings.	
Cornwall Council	9 August 2017	Methodology according to DMRB was considered to be appropriate.	
		It was agreed that assessing landscape character at the level of Landscape Character Areas (LCA's), rather than Landscape Character Units (LCU's), was appropriate.	
		The scope of viewpoints and receptors was considered to be thorough overall.	
		In the meeting and in subsequent email and telephone correspondence, Cornwall Council suggested additional viewpoints and photomontage locations.	The additional viewpoints and photomontage locations were visited, and two were subsequently included in the assessments.
		Cornwall also suggested that additional Summer photomontages should be provided from several locations.	Summer Baseline photography is included in the LVIA. Summer and winter photomontages will be provided from an agreed set of the worst affected views near the main junctions. It is not considered necessary of proportionate to include summer as well as winter

<sup>42</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010026/TR010026-000004-Scoping%20Report.pdf>

<sup>43</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010026/TR010026-000033-Scoping%20Opinion.pdf>

			photomontages for all viewpoints.
Cornwall Council	24 January 2018	Preliminary Environmental Information Report (PEIR) chapter and Draft Environmental Masterplans submitted for comment. Comments received, mainly relating to the Environmental Masterplans	Environmental Masterplans have been updated to reflect the most current scheme design as well as comments from Cornwall Council and other ES topic specialists
Natural England	7 and 13 November 2017	Natural England were asked to engage regarding the scope and method for the LVIA.	Natural England stated that engagement on this topic outside Nationally designated landscapes was beyond their remit.

## 7.9 Assessment assumptions and limitations

- 7.9.1 Field work has been carried out during daylight and the hours of darkness in summer, autumn, winter, and spring, with trees in and out of leaf. The assessment has therefore been carried out with a robust understanding of the landscape through the seasons and at different times of the day. Viewpoint photography figures present a complete set of baseline views, available for all viewpoints.
- 7.9.2 The assessment of night-time landscape and visual effects within this chapter is based on the entire proposed scheme being unlit. A variation on the scheme design where sections are lit is assessed within **Landscape assessment table - operation** (Volume 6 Document Ref 6.4 ES Appendix 7.4).
- 7.9.3 The LVIA has been informed using a full arboricultural survey and **Arboricultural impact assessment** (Volume 6 Document Ref 6.4 ES Appendix 7.6). In addition, an in-depth understanding of the landscape through field work and the use of Google Earth has enabled a robust assessment to be carried out on the effects on vegetation.
- 7.9.4 There has been and will continue to be ongoing and iterative co-ordination between landscape and related disciplines such as noise, heritage and ecology. This has led to minor design changes to the scheme and mitigation measures.

### Limits of deviation

- 7.9.5 An assessment has been conducted within the limits of deviation outlined in Limits of Deviation within **Approach to EIA** (Volume 6 Document Ref 6.2 ES Chapter 4)
- 7.9.6 The worst case has been considered within the Landscape and Visual impact assessment (Volume 6 Documents Reference 6.2 Chapter 7). The proposed limits of deviation might lead to negligible changes to the composition of views or incrementally increase or decrease the loss or retention of landscape features immediately adjacent to the scheme. These potential changes are not considered likely to give rise to any new effects, or to any materially worse adverse or better beneficial landscape or visual effects, from those predicted in the assessment.

## 7.10 Design, mitigation and enhancement measures

7.10.1 The design and landscape mitigation measures relating to landscape and views, are shown on the **Environmental Masterplans** at Volume 6 Document Ref 6.3 ES Figure 7-6. These measures comprise the three different types described below.

### Engineering design

#### Embedded design measures

- 7.10.2 Design measures are those built into the scheme through an iterative process of design and assessment. The paragraphs below list these measures that were introduced through the iterative design and assessment process leading up to and following the Statutory Consultation on the PEIR design.
- 7.10.3 Throughout the scheme, cutting and slope embankments have been slackened from 1:2 gradients to 1:2.5 to ensure that the proposed landscape mitigation planting can be successfully implemented and maintained to establishment. There are instances where this shallowing of gradients would not be possible. These areas include pinch points where land take is constrained and slopes have been locally steepened to retain existing features, thereby avoiding or reducing direct effects on them and decreasing the need for mitigation. Examples of this approach include:
- a scheduled round barrow (NHLE 1017050) At CH 12+890, to the south west of the proposed scheme would be retained in-situ, behind a purpose-designed retaining structure; and
  - Locally steepened earthworks to retain existing trees and field boundary hedgerows to the south of Silver Springs at Chainage 1+050 near Chiverton.
- 7.10.4 Where proposed new sections of side roads are designed to tie into existing single track lanes. At Silverwell (NW of Ch. 1+800), Callestick Vean South (N of Ch. 4+000, Tolgroggan Bridge (Ch. 8+600), Marazanvose green bridge (Ch. 7+300), Trevalso (Ch. (+700), Pennycomequick (Ch. 11+000), and Little Ennis Farm (Ch. 11+500), the proposed side roads have been reduced in width from a standard 6.8m shown at PEIR down to a more appropriate width of approximately 3.5m to match the width of lanes they tie into. This is in response to consultation feedback and is intended to create new side roads with a character much more in keeping with that of their respective adjoining Cornish Lanes.
- 7.10.5 On the bend of the B3277 (NW of Ch. 0+800) to the north west of the existing roundabout, the forward visibility splay on the inside of the bend was reduced to its minimum allowable extent in order to retain the short section of existing Cornish hedge and woodland planting either side of the police bay.
- 7.10.6 The location of the rest Area (NW of Ch. 0+900) on the B3277 at three Barrows was influenced by the landscape architect. The proposed location was selected from several other options as it allows the retention of the existing screening bund to the north of Starbucks and also benefits most from the existing woodland block to the northwest screening views from nearby properties
- 7.10.7 At Chiverton Cross (Ch. 0+800 to Ch. 2+100), a 1.8m high Cornish hedge is proposed for aesthetic reasons instead of a standard noise barrier to the north side of the mainline and side roads. The Cornish hedge would provide the

necessary noise mitigation, but also improve the aesthetic design of the scheme and better integrating it into the character of the receiving landscape. These wider structures required redesign of the verges and embankments of the scheme to accommodate them at the top of the embankments where their noise screening is most effective. 1.8m structures have the added advantage of visually screening cars and all vehicle headlights from views to the north.

- 7.10.8 The junction and tie-in to the old A3075 (S of Ch. 1+600), southeast of the new Chiverton Junction was moved west and realigned to retain the existing mature trees and scrub forming the southwest boundary to and screens views out from Trevisson Business Park.
- 7.10.9 The location and indicative design of a proposed drainage ditch through TPO woodland (S of Ch. 3+700) was selected through collaboration between the scheme engineers and the landscape architect and ecologist to minimise impacts on the TPO woodland. The alternative design with two drainage ditches connecting either side of the local low point would have resulted in the loss of more TPO woodland.
- 7.10.10 In the PEIR design, the proposed farm track at Nanteague passed through the retained patch of Oak woodland at Ch. 6+500. This was subsequently realigned around the outside of this woodland to reduce the impact on the landscape through retention of as much of the existing woodland as possible.
- 7.10.11 Noise barriers at Marazanvose on the west bound side between Ch. 7+100 and Ch. 7+300 need to be increased in height above 1.8m in order to deliver noise mitigation to NFH (1.8m is considered to be a reasonable aesthetically pleasing maximum height of such a Cornish hedge in this area). Rather than propose a taller wall, one solution investigated was to place the 1.8m hedge on a slight 1.2m high embankment or bund to give the additional height. However, the footprint of the hedge and the bund would have occupied a swathe of land approximately 13m wide. Consequently, a decision was made in agreement with the relevant landowner to avoid the land take and use a 3m high timber noise barrier. This noise barrier was also extended west to Ch. 6+800 to screen the proposed layby and east tie into the start of the proposed cutting at Ch 7+500 to increase noise mitigation.
- 7.10.12 Since PEIR, a proposed green bridge has been introduced at Marazanvose (Ch. 7+300). The primary reason for this is as mitigation for bats and mammals crossing the scheme. This also offers the opportunity for vehicular and pedestrian movements across the bridge improving connectivity.
- 7.10.13 Several aspects of the design of this bridge have been influenced by the scheme's landscape architects. The southern ramp of the proposed green bridge turns a tight 90 degrees to the south as soon as possible after the bridge structure. This feature of the design was introduced to:
- use the embankment as additional noise and visual screening for the properties to the south;
  - retain as many of the existing trees along the track heading south east;
  - to minimise impacts on the operations and circulation within the adjoining farm; and
  - provide a farm and potentially public access to the bridge from the severed end of the Quiet Lane (Ch. 7+100)

- 7.10.14 Northern green bridge ramp is diverted in a shallow eastward arc shape in order to retain the lane-side oak trees as a valued landscape element and as bat foraging and commuting habitat leading up to the green bridge
- 7.10.15 The new section of Zelah Bypass passing to the south of Chyverton Park (N of Ch. 7+500 to Ch. 8+100) has been realigned further to the south to avoid any potential direct effects on the landscape elements such as trees or Cornish hedgerows within or on the boundary of the Chyverton Park Registered Park and Garden.
- 7.10.16 The proposed balancing pond to the north of Ch. 11+100 was moved to this location from its previous position at Ch 10+900 following PEIR. This move was made to alleviate concerns raised by residents at Pennycomequick regarding the visual impact of the pond immediately to the south of their property.
- 7.10.17 The micro-alignment of the mainline around the south of Carland Quarry (Ch. 12+700) to retain the quarry and the distinctive landmark of pine woodland associated with it. This has been balanced with the potential encroachment and avoiding potential direct effects on the fabric of the Scheduled round barrow (NHLE 1017050) to the south of the scheme.
- 7.10.18 In order to provide improved cycle and pedestrian access between the realigned existing A30 and the services at Carland Cross. A proposed pedestrian and cycle link was introduced following PEIR. This also provides public access to the proposed additional Open Access Land and better appreciation of the barrow cemetery at Carland Cross adjacent to Warrens Barrow.

### **Landscape mitigation**

- 7.10.19 A soft landscape scheme has been designed either side of the entire length of the route. This includes soft landscape features, which are considered essential to the scheme and would form its permanent soft estate. These measures have many and often multiple functions, which are described under Environmental Functions below.
- 7.10.20 The mitigating effect that the measures designed into the scheme have on the landscape and views are described in detail in the assessment tables for construction and operational landscape and visual effects within the ES, and can be found at Volume 6 Document Ref 6.4 ES Appendices 7.2, 7.3, 7.4, and 7.5.
- 7.10.21 The Environmental Masterplan drawings at Volume 6 Document Ref 6.3 ES Figure 7.6, have been prepared using the guidance set out in DMRB Volume 10, Section 1. DMRB uses a system of 'Functions' and 'Elements' to describe environmental features. The use of this system enables environmental data to be recorded and developed in a consistent manner, linked through all stages of the scheme, from initial design through to construction and management.
- 7.10.22 The landscape strategy has been prepared to address mitigation requirements for both ecology and landscape assets. The design rationale has focused on replacement of vegetation lost during construction, enhancing natural habitats and providing screening vegetation. Where planting is proposed, it includes native species reflecting those currently on site, and would be of local provenance, as described in the Forestry Commission's Practice Note on Using Local Stock for Planting Native Trees and Shrubs. This design rationale also sits in line with the

requirements of Cornwall Council's Cornwall Design Guide (2013) where proposed landscaping should be based on locally sourced species native to Cornwall and appropriate to the specific locality.

- 7.10.23 Local native species would be introduced in areas where vegetation removal is required to accommodate construction. Swathes of native tree and shrub species would be punctuated with more mature standard trees giving instant height and impact, helping to settle the scheme within the surrounding landscape. Over time, this vegetation would mature to offer effective integration and screening whilst also reinforcing the character of the local landscape. Hedgerows would also be incorporated to define new boundaries and tie into the existing field patterns. Cornish hedgerows are used where appropriate to the local character, some with grassed tops and others with hedge on top.
- 7.10.24 All areas of disturbed ground resulting from the construction of the scheme and not specifically indicated on the Environmental Masterplans as receiving landscape mitigation, would be graded, cultivated and reinstated to its current condition to tie smoothly back into the surrounding fields.

#### Environmental masterplans

- 7.10.25 Within the overall environment of the highway and its surroundings there are many elements that influence the design and maintenance. The elements are divided into broad classification types such as Landscape Elements (LE), Environmental Elements (E) and Planning and Policy Features (P). These broad classifications are then sub-divided into more specific elements e.g. under the Landscape Elements, grassed areas can then be subdivided again according to their detailed design or management needs, in conjunction with the stated function.
- 7.10.26 Those elements which help to mitigate the adverse impacts of the scheme would require regular maintenance and inspection to achieve their long-term objectives.
- 7.10.27 Landscape Elements (LE)<sup>44</sup>: Landscape mitigation measures that form the major components of the Highway's soft estate. Landscape features found within the highway estate, which can encompass both hard landscape features (i.e. retaining walls, hard surfacing) and elements of the soft estate (i.e. grasslands and woodlands);
- 7.10.28 Environmental Elements (E)<sup>45</sup>: Non-landscape features of the highway estate that have environmental functions, i.e. noise attenuation measures, water quality controls, protected species, and legislated elements such as injurious weeds and pests; and
- 7.10.29 Planning Policy Features(P)<sup>46</sup>: Features pertaining to, or situated in close proximity to, the highway estate that have a specific designation or land use, i.e. Special Area of Conservation (SAC), Scheduled Ancient Monuments, and National Park.

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<sup>44</sup> DMRB Volume 10 Environmental Design and Management, Section 0 Environmental Objectives, Part 3 Ha 88/01 Landscape Elements

<sup>45</sup> DMRB Volume 10 Environmental Design and Management, Section 0 Environmental Objectives, Part 4 Ha 89/01 Environmental Elements

<sup>46</sup> DMRB Volume 10 Environmental Design and Management, Section 0 Environmental Objectives, Part 5 HA 90/01 Planning And Policy Features



7.10.30 For this ES, the Environmental Masterplans have been annotated in accordance with this system.

#### Environmental functions

7.10.31 Environmental Functions (EF) are defined as the intended purpose of proposed features within the highway estate in environmental terms.

7.10.32 A summary description of each of the Environmental Functions as given in DMRB Volume 10 and used within the Environmental Masterplan, Volume 6 Document Ref 6.3 ES Figure 7.6 is provided in the following paragraphs as follows:

- EFA Visual Screening;
- EFB Landscape Integration;
- EFC Enhancing the Built Environment;
- EFD Nature Conservation and Biodiversity;
- EFE Visual Amenity;
- EFF Heritage;
- EFH Water Quality;
- EFG Auditory Amenity;
- EFJ Agricultural/Highway Boundary; and
- EFK Access.

#### Long-term management

7.10.33 The Contractor would carry out environmental monitoring, aftercare and management for the 24 month Aftercare Period following completion of the works. This would be undertaken in accordance with the agreed Environmental, Landscape and Ecology Management Plan, which will be provided for consultation and will accompany the application.

7.10.34 During the Aftercare Period, the Contractor would review the effectiveness of the environmental mitigation against their intended function as identified within the ES and would provide any remedial actions if required.

7.10.35 At the completion of this 24 month Aftercare Period, the management of the soft estate and environmental mitigation measures would be transferred to Highways England.

#### **Construction mitigation**

7.10.36 For the construction phase, environmental measures have been developed as part of the iterative design. These have been accounted for in the assessment of effects without mitigation. These environmental commitments incorporated into the construction strategy include:

- Protect and retain valued existing vegetation and other landscape features (in particular; trees, woodland, hedgerows and Cornish hedgerows) wherever possible in accordance with *BS5837:2012. Trees in relation to design, demolition and construction. Recommendations* and the scheme **Arboricultural Impact Assessment** (Volume 6 Document 6.4 Appendix 7.6).
- Produce procedure to record, protect, heritage assets and where necessary remove and reinstate Grade II Listed milestones.

- Production of a construction stage lighting strategy to limit the use of construction lighting and ensure all essential lighting is specified and designed to reduce light spill.
- A commitment to reinstate to its current condition, disturbed land not required for the permanent works following completion of sections of the scheme and associated environmental mitigation,
- Stripping handling and management of soils in accordance with DEFRA (2009) Construction Code of Practice for the sustainable use of soils on construction sites.
- Implementation of a hierarchy of mitigation to PRow and WCH routes both during construction and operation.
- Provision of replacement open space land to the east of Carland Cross Junction as shown on the Special Category Land Plan – Vol 2, Doc Ref 2.3
- Considerate construction management.

7.10.37 These embedded measures are described in **Outline CEMP** (Volume 6 Document Ref 6.4 Appendix 16.1).

7.10.38 Due to the short-term and temporary nature of the construction effects identified, it is not considered feasible to include any additional landscape mitigation measures to further reduce the construction phase effects.

## 7.11 Assessment of Effects

### Construction assessment

7.11.1 Construction activities associated with this development would take place over a period of approximately 3 years (2020-2023).

7.11.2 The temporal aspect of construction phase assessment is described in the methodology at Section 3.6 above.

7.11.3 Sources of construction effects on landscape and visual receptors include:

- temporary construction compounds with associated lighting and fencing;
- temporary haul roads;
- stockpiling and storage of materials;
- excavation and handling of materials;
- on- and off-site construction traffic; and
- on-site plant, such as:
  - chainsaws and excavators for site clearance;
  - articulated dump trucks, excavators up to 35T capacity, dozers and rollers for bulk earthworks;
  - cranes, telescopic boom lifts, piling rigs and telescopic forklifts for construction of structures; and
- night time security lighting year round; and
  - isolated task lighting would be provided intermittently where required during the winter months only.

7.11.4 Refer to **Consideration of alternatives** (Volume 6 Document Ref 6.2 ES Chapter 3) for a fuller description of the construction phase.

### **Landscape construction effects**

- 7.11.5 The landscape is essentially rural, however a relatively high proportion of road and energy infrastructure, such as pylons, wind turbines and solar photovoltaic parks, is present along the ridgeline on which the scheme would lie. While construction activity is not an everyday occurrence in this landscape, other similar activities, such as agricultural activity, are a normal and necessary part of the rural environment.
- 7.11.6 The susceptibility and sensitivity of the landscape receptors to changes and disruption brought about by temporary construction works is considered to be similar to their sensitivity to the changes from operational developments of the type proposed. Sensitivity of landscape receptors is summarised in Table 7-6  
Summary of landscape sensitivity above.
- 7.11.7 Construction activities would be limited to the scheme and its immediate surroundings. Construction Compounds and laydown areas would be located in a number of fields along the length of the scheme. These locations are mapped in Volume 6 Document Reference 6.3 ES Figure 7.6. During isolated stages through construction, such as erection of foundation slabs for structures, taller plant and structures such as piling rigs, cranes and scaffolding would be visible from a wider area than the operational scheme would be. The construction phase would be short-term and temporary and would vary in intensity over three years. The effects of the construction phase from the sources described above would be entirely reversible.
- 7.11.8 Set within the context of a working rural environment, the magnitude of change to the landscape and visual environment, over and above that assessed for the operational development, would generally be limited in comparison to permanent and irreversible operational effects.
- 7.11.9 The value, susceptibility and sensitivity of the landscape receptors to changes brought about by construction of the type proposed is assessed under baseline.
- 7.11.10 The summary of landscape construction landscape effects is contained in Table 7-10. The full assessment is available in **Landscape assessment - construction** (Volume 6 Document Ref 6.4 ES Appendix 7.2).

**Table 7-10 Summary of landscape construction effects**

Landscape receptor	Sensitivity	Construction impact	Significance of short-term effects / Effect during construction phase
Direct Effects on the components and character of the landscape within the order limits			
Features and overall character of the local landscape	Moderate	Moderate	Moderate and significant
Direct and indirect effects on the receiving Character Areas (CA) receptors			
CA 11 – Redruth, Camborne, and Gwennap	High	Negligible	Slight adverse and insignificant
CA 14 – Newlyn Downs	Moderate	Minor	Slight adverse and insignificant
Indirect effects on the settings of nearby Landscape Character Area receptors			
CA 12 – St Agnes	High	No change	Neutral
CA 13 – Fal Ria, Truro and Falmouth	Moderate	Negligible	Slight adverse and insignificant
Indirect effects on the settings of nearby Landscape Designation receptors			
Cornwall and West Devon World Heritage Site (CWD WHS) – A6i Gwennap Mining District	High	Negligible	Slight adverse and insignificant
Cornwall and West Devon World Heritage Site (CWD WHS) – A7 St Agnes	High	No change	Neutral
Cornwall Area of Outstanding Natural Beauty (AONB) – St Agnes	High	No change	Neutral
Heritage Coast – 7 St Agnes	High	No change	Neutral
St Clement Area of Great Landscape Value (AGLV)	Moderate	Negligible	Slight adverse and insignificant
Chyverton Registered Park and Garden (RPG) (List Entry: 1000512)	Moderate	Negligible	Slight adverse and insignificant

### **Visual construction effects**

- 7.11.11 The value, susceptibility and sensitivity of the visual receptors to changes brought about by construction of the type proposed is assessed under baseline.
- 7.11.12 The summary of landscape construction visual effects is contained in Table 7-11. The full assessment is available in **Visual assessment table - construction** (Volume 6 Document Ref 6.4 ES Appendix 7.3).
- 7.11.13 Viewpoint locations are shown in Volume 6 Document Ref 6.3 ES Figure 7.1. Viewpoint photographs and photomontages are presented in Volume 6 Document Ref 6.3 ES Figure 7.5.

**Table 7-11 Summary of visual construction effects**

VP	Receptors represented	Receptor sensitivity	Construction impact	Effect at winter during construction year
1	Users of bridleways 301/10/1 & 301/10/3 enjoying the visual setting of the heritage asset – CWDM WHS A6i Gwennap Mining District	High	Negligible adverse	Slight adverse and insignificant
	Transport receptors along the Blackwater Bypass of the A30	Low		Slight adverse and insignificant
2	Users of services at Chiverton Cross	Low	Minor adverse	Slight adverse and insignificant
3	Workers at Trevisson Business Park	Low	Moderate adverse	Slight adverse and insignificant
	Transport receptors using the A3075 near Trevisson Business Park	Low		Slight adverse and insignificant
4	Road users enjoying views across the landscape, within which the tower of Grade II listed St Peter's Church and the nearby– Four Burrows Barrow Cemetery (1016054) can be seen	Moderate	Minor adverse	Slight adverse and insignificant
5	Users of Byway 314/66/1	Moderate	Negligible adverse	Slight adverse and insignificant
	People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016105)	High		Slight adverse and insignificant
6	Residential receptors at Callestick Vean (south)	High	Moderate adverse	Moderate adverse and significant
	Pedestrians and equestrians using bridleway 314/64/1	Moderate		Moderate adverse and significant
	People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016103)	High		Moderate adverse and significant
	Transport receptors using the B3284 near Callestick Vean (south)	Low		Slight adverse and insignificant
7	Residential receptors at Creegmeor Farm	High	Minor adverse	Moderate adverse and insignificant
	Pedestrians and equestrians using bridleway 314/65/1	Moderate		Slight adverse and insignificant
8	Transport receptors along the B3284	Low	Minor adverse	Slight adverse and insignificant

VP	Receptors represented	Receptor sensitivity	Construction impact	Effect at winter during construction year
	Residential receptors at Hillview Farm	High		Moderate adverse and significant
	Representative of views of outdoor workers at Hill View Farm	Moderate		Slight adverse and insignificant
9	Pedestrians and equestrians using bridleway 309/3/1	Moderate	Moderate adverse	Moderate adverse and significant
10	Residential receptors at Nanteague Farm	High	Minor adverse	Moderate adverse and significant
11	Pedestrians using footpath 314/67/1	Moderate	Moderate adverse	Moderate adverse and significant
12	Residents at Marazanvose	High	Moderate adverse	Large adverse and significant
	Transport receptors along the existing A30 near Marazanvose	Low		Slight adverse and insignificant
13	Residential receptors at the bungalow at NFH	High	Minor adverse	Moderate adverse and significant
	Users of holiday accommodation at NFH	Moderate		Slight adverse and insignificant
14	Residential receptors at NFH	High	Negligible adverse	Slight adverse and insignificant
	People enjoying views to and from Grade II listed NFH and attached wall (1136610)	Moderate		Slight adverse and insignificant
15	Pedestrians using footpath 319/16/1	Moderate	Moderate adverse	Moderate adverse and significant
	Representative of views of outdoor workers at NFH	Moderate		Moderate adverse and significant
16	People enjoying the views to and from Chyverton Park Lodge and associated walls and Gateposts Grade II listed buildings (1136926)	Moderate	Minor adverse	Slight adverse and insignificant
	Residential receptors at Chyverton Park Lodge	High		Moderate adverse and insignificant
	Transport receptors along the local road near Chyverton Park	Low		Slight adverse and insignificant
17	Pedestrians and equestrians using bridleway 319/9/1	Moderate	Moderate adverse	Moderate adverse and significant
18	Pedestrians using Footpath 319/3/1	Moderate	Negligible adverse	Slight adverse and insignificant
19	Pedestrians using the footpath near Church Lane	Moderate	Minor adverse	Slight adverse and insignificant
	Transport receptors along the existing A30	Low		Slight adverse and insignificant

VP	Receptors represented	Receptor sensitivity	Construction impact	Effect at winter during construction year
20	Residential receptors at Polstain Farm	High	Moderate adverse	Moderate adverse and significant
	Cyclists using NCR 32 near Herver Lane	High		Moderate adverse and significant
	Transport receptors along High Road and Herver Lane	Low		Slight adverse and insignificant
21	Residential receptors at Zelah Hill Cottage and Mount Pleasant	High	Minor adverse	/Moderate adverse and significant
	Transport receptors on the existing A30 near Zelah Hill	Low		Slight adverse and insignificant
22	Cyclists using NCR 32 link on the unclassified local road	High	Negligible adverse	Slight adverse and insignificant
	Residential receptors at Honeycombe Farm	High		Slight adverse and insignificant
	Transport receptors on the unclassified local road near Honeycombe Farm	Low		Slight adverse and insignificant
23	Residential receptors at Pennycomequick	High	Minor adverse	Moderate adverse and significant
	Transport receptors along the Quiet Lane near Pennycomequick	Moderate	Moderate adverse	Moderate adverse and significant
24	Residential receptors at Journey's End, Racland House, and Four Winds	High	Minor adverse	Moderate adverse and insignificant
	Transport receptors along the existing A30 near Newlyn Downs	Low		Slight adverse and significant
25	Representative of views of recreational users of Newlyn Downs	Moderate	Negligible adverse	Slight adverse and insignificant
	Pedestrians using footpath 324/10/1	Moderate		Slight adverse and insignificant
26	Representative of views of walkers and other recreational users of Newlyn Downs	Moderate	Moderate adverse	Moderate adverse and significant
27	People enjoying the views to and from nearby heritage assets – Barrow Cemetery at Carland Cross (1016888, 1017050, 1020758)	High	Moderate adverse	Large adverse and significant



VP	Receptors represented	Receptor sensitivity	Construction impact	Effect at winter during construction year
	Representative of views of walkers and other recreational users of open space land at Carland Quarry.	Moderate		Moderate adverse and significant
28	Transport receptors along the unclassified local road	Low	Negligible adverse	Slight adverse and insignificant
29	Pedestrians using footpath 318/63/2 and pedestrians and equestrians using bridleways 318/63/1 & 318/63/3 within the Cornwall AONB, the Heritage Coast, open space land, and those enjoying views to and from nearby heritage assets – Bowl Barrow (1016443), CWDM WHS A7 St Agnes	High	No change	Neutral
30	Residential receptors at dwellings within Silverwell	High	Moderate adverse	Large adverse and significant
	Transport receptors on the local road near Silverwell	Low		Slight adverse and insignificant
31	Transport receptors on the designated Quiet Lane near Ennis Farm	Moderate	Minor adverse	Slight adverse and insignificant
	Residential receptors at Ennis Farm and Higher Ennis Farm	High		Moderate adverse and significant
	Representative of views of outdoor workers at Ennis Farm	Moderate		Slight adverse and insignificant

## Operational assessment

- 7.11.14 Throughout the iterative design process, interventions have been made and integrated into the scheme with the primary purpose of avoiding or reducing adverse effects at source and to make the scheme fit better into its landscape setting. These measures are considered integral to the scheme rather than as mitigation measures, and are described in more detail under Environmental Measures in Section 2.6 in paragraphs 2.6.52 – 2.6.56 of **The project** (Volume 6 Document Ref 6.2 ES Chapter 2).
- 7.11.15 Paragraphs 7.6.14 - 7.6.23 set out the temporal scope of this assessment.
- 7.11.16 This operational assessment considers the medium-term effects, from the end of construction in 2023 onward to the fifteenth operational year in 2038, whilst the proposed landscape mitigation is being established.
- 7.11.17 Landscape mitigation has been proposed. This comprises soft landscape planting and Cornish Hedges and is shown on the Environmental Masterplans on Volume 6 Document Ref 6.3 ES Figure 7.6 and described in Section 7.10 above.
- 7.11.18 The assessment of residual effect then takes account of the established mitigation and goes on to assess the long-term effects that would persist beyond year fifteen. These are referred to in this assessment as residual effects.

### Landscape operational effects

- 7.11.19 The local landscape is characteristically rural with a number of nucleated settlements and scattered farmsteads throughout. Built form and infrastructure, such as solar farms, wind turbines, and pylons are an existing part of the landscape. The landscape is generally open and exposed, at times with long vistas out to the eastern and western coasts of the peninsula. The undulating topography causes some of these vistas to be interrupted, containing the potential sense of expansiveness. In historic and more settled parts of the landscape, particularly those areas which reflect the history of mining small-holdings, the landscape becomes smaller in scale, and more enclosed due to the tall, dense hedgerows and narrow winding lanes.
- 7.11.20 The value, susceptibility and sensitivity of the landscape receptors to changes brought about by development of the type proposed is assessed under baseline. The corresponding assessment of effects on each character area receptor is presented in summary form in Table 7-12. The full assessment is available in **Landscape assessment table - operation** (Volume 6 Document Ref 6.4 ES Appendix 7.4).

Table 7-12 Summary of landscape operational effects

Landscape receptor	Sensitivity	Operational impact	Operational effects at winter of Year 1	Mitigating effect of landscape scheme	Significance of residual effects at Year 15
Direct Effects on the components and character of the landscape within the order limits					
Features and overall character of the local landscape	Moderate	Moderate adverse	Moderate and significant	The landscape mitigation, shown in Volume 6, Document 6.3 ES Figure 7.6 Environmental Masterplans would reduce this effects to minor adverse	Slight adverse and insignificant
Direct effects on the host Landscape Character Area receptor					
CA 11 – Redruth, Camborne, and Gwennap	High	Negligible adverse	Slight adverse and insignificant	The adverse magnitude of change would be reduced slightly, but not enough to change the effect category.	Slight adverse and insignificant
CA 14 – Newlyn Downs	Moderate	Moderate adverse	Moderate adverse and significant	The adverse magnitude of change would be reduced down to minor adverse.	Slight adverse and insignificant
Indirect effects on the settings of nearby Landscape Character Area receptors					
CA 12 – St Agnes	High	No change	Neutral	The adverse magnitude of change would be reduced incrementally.	Neutral
CA 13 – Fal Ria, Truro and Falmouth	Moderate	Negligible adverse	Slight and insignificant	The adverse magnitude of change would be reduced incrementally.	Slight adverse and insignificant
Indirect effects on the settings of nearby Landscape Designation receptors					
Cornwall and West Devon World Heritage Site (CWD WHS) – A6i Gwennap Mining District	High	Negligible beneficial	Slight beneficial and insignificant	The adverse magnitude of change would be reduced incrementally.	Slight beneficial and insignificant

Landscape receptor	Sensitivity	Operational impact	Operational effects at winter of Year 1	Mitigating effect of landscape scheme	Significance of residual effects at Year 15
Cornwall and West Devon World Heritage Site (CWD WHS) – A7 St Agnes	High	No change	Neutral	The adverse magnitude of change would be reduced incrementally.	Neutral
Cornwall Area of Outstanding Natural Beauty (AONB) – St Agnes	High	No change	Neutral	The adverse magnitude of change would be reduced incrementally.	Neutral
Heritage Coast – 7 St Agnes	High	No change	Neutral	The adverse magnitude of change would be reduced incrementally.	Neutral
St Clement Area of Great Landscape Value (AGLV)	Moderate	No change	Neutral	The adverse magnitude of change would be reduced incrementally.	Neutral
Chyverton Registered Park and Garden (RPG) (List Entry: 1000512)	Moderate	Minor adverse	Slight adverse and insignificant	The adverse magnitude of change would be reduced down to negligible.	Slight adverse and insignificant

### Visual operational effects

- 7.11.21 The value, susceptibility and sensitivity of the visual receptors to changes brought about by development of the type proposed is assessed under baseline. The corresponding assessment of residual effects on each visual receptor is presented in summary form in Table 7-13. The full assessment, including operational effects at year 1 and residual effects at year 15, is available in **Visual assessment table - operation** (Volume 6 Document Ref 6.4 ES Appendix 7.5).
- 7.11.22 Viewpoint locations are shown on Volume 6 Document Ref 6.3 ES Figure . Viewpoint photographs and photomontages are presented in Volume 6 Document Ref 6.3 ES Figure .

### *Effects on residential receptors*

- 7.11.23 A number of residential receptors were scoped out of the ES assessment at any early stage. This is described in more detail at 7.7.86 within the Baseline.
- 7.11.24 Residential receptors experiencing views from (NFH) (VP 14) would receive no change to their views as a result of the scheme.
- 7.11.25 The following residential receptors would receive moderate adverse insignificant effects in year 1 and year 15:
- Zelah Hill Cottage, Mount Pleasant, and Tregorlands (VP 21);
  - Honeycombe Farm (VP 22); and
  - at Ennis Farm and Higher Ennis Farm (VP 31).
- 7.11.26 Residential receptors at Pennycomequick (VP 23) would receive moderate adverse significant effects in year 1, reducing down slightly, but still remaining moderate adverse significant effects in year 15, as a result of mitigation.
- 7.11.27 Residential receptors at Marazanvose (VP 12) would receive large adverse significant effects in year 1, reducing down to moderate adverse significant effects in year 15, as a result of mitigation.
- 7.11.28 Due to the increased portion of road infrastructure in views and the removal of vegetation, the following residential receptors would receive large significant effects in year 1:
- Callestick Vean (south) (VP 6);
  - Creegmeor Farm (VP 7);
  - Bungalow at NFH (VP 13); Chyverton Lodge (VP 16);
  - Polstain Farm (VP 20); and
  - at Journey's End, Racland House, and Four Winds (VP 24).
- 7.11.29 Reinstatement of hedgerows and introduction of deciduous woodland planting as mitigation, would reduce the effects down to moderate adverse and significant by year 15, for Callestick Vean (south) (VP 6), Creegmeor Farm (VP 7), Bungalow at NFH (VP 13), Chyverton Lodge (VP 16), Polstain Farm (VP 20) and Ennis Farm and Higher Ennis Farm (VP 31), by year 15, while those at Journey's End, Racland House, and Four Winds (VP 24) would remain large and significant.
- 7.11.30 The following receptors would receive very large significant effects in year 1, as a result of the dominance of the scheme in views:
- Nanteague Farm (VP 10); and

- within Silverwell (VP 30).

7.11.31 These effects would reduce down to large adverse and significant by year 15. This would be as a result of the maturation of woodland planting, which would filter views.

*Effects on recreational receptors*

7.11.32 All recreational receptors at the following viewpoints would receive slight to moderate adverse effects in year 1, reducing down or remaining slight, insignificant adverse effects in year 15, as a result of mitigation:

- Users of byway 314/66/1 (VP 5);
- Pedestrians and equestrian using bridleway 314/64/1 (VP 6);
- Pedestrians and equestrians using bridleway 314/65/1 (VP 7); Pedestrians and equestrians using bridleway 309/3/1 (VP 9);
- Pedestrians using footpath 314/67/1 (VP 11);
- Pedestrians and equestrians using bridleway 319/9/1 (VP 17) Pedestrians using footpath 319/8/1 (VP 18);
- Pedestrians using the undesignated footpath near Church Lane (VP 19);
- Pedestrians using footpath 324/10/1 within Newlyn Downs (VP 25);
- Pedestrians using footpath 318/63/2 and pedestrians and equestrians using bridleways 318/63/1 & 318/63/3 (VP 29); and
- People enjoying the Cornwall AONB and open space land (VP 29).

7.11.33 Pedestrians and equestrians using bridleways 301/10/1 & 301/10/3 (VP 1) would receive slight beneficial effects in years 1 and 15, due to the removal of the current lighting columns, the narrowing of the carriageway and the reduction of the overall proportion of road infrastructure in the view. These beneficial effects would not be significant.

7.11.34 Cyclists using NCR 32 are represented by viewpoints near Henvver Lane (VP 20) and near the B3285 (VP 22). At year 1, effects on VP 20 are predicted to be large and significant, due to the scheme becoming a noticeable element within the views. At VP 22 they are predicted to be moderate and significant. By year 15, woodland planting would be of established sufficiently to provide filtering of views of the scheme, and the effects for (VP 20) would reduce to moderate adverse and significant and (VP 22) to remain at moderate adverse and significant.

7.11.35 Pedestrians using footpath 319/16/1 (VP 15) and pedestrians and equestrians using bridleway 319/9/1 (VP 17) would receive large adverse significant effects in year 1, due to the removal of vegetation. By year 15 the establishment of deciduous woodland along the sides of the highway would reduce the effects to moderate adverse and significant.

7.11.36 The following receptors within and south of Newlyn Downs, would receive large adverse and significant effects in year 1:

- Walkers and other recreational users of Newlyn Downs (VP 26); and
- Users of the open space land at Carland Quarry (VP 27).

7.11.37 Due to the need to maintain an open aspect in keeping with the landscape character of this area, mitigation planting in these sections of the scheme would be low in height and would not provide filtering of views. The effects at year 15 would therefore remain at large adverse and significant.

*Effects on transport receptors*

7.11.38 All transport receptors at the following viewpoints would receive slight adverse to moderate adverse effects in year 1, reducing down to or remaining at slight adverse and insignificant effects in year 15, as a result of mitigation:

- Users of the A3075 near Trevissome Business Park (VP 3);
- Users of the local road near Callestick Vean (south) (VP 6);
- Users of the B3284 near Chybucca (VP 8);
- Users of the existing A30 near Marazanvose (VP 12);
- Users of the local road near Chyverton Park (VP 16);
- Users of the existing A30 (VP 19);
- Users of High Road and Henvver Lane (VP 20);
- Users of the existing A30 near Zelah Hill (VP 21);
- Users of the B3285 and the existing A30 (VP 22);
- Transport receptors along the Quiet Lane near Pennycomequick (VP 23);
- Users of the existing A30 near Newlyn Downs (VP 24);
- Users of the local road near Cargoll Farm (VP 28); and
- Users of the local road near Silverwell (VP 30).

7.11.39 The following receptors would receive slight beneficial effects in year 1 and in year 15.

- Users of the Blackwater Bypass of the A30 (VP 1); and
- Users of services at Chiverton Cross (VP 2).

7.11.40 Transport receptors on the designated Quiet Lane near Ennis Farm (VP 31) would receive large adverse significant effects in year 1. Through woodland planting on the embankments on the scheme, these effects would reduce down to moderate adverse and significant by year 15.

*Effects on employment receptors*

7.11.41 Outdoor workers at Hillview Farm (VP 8), and NFH (VP 15) are predicted to receive moderate to large adverse significant effects in year 1. At Ennis Farm (VP 31), receptors are predicted to receive slight adverse and insignificant effects in year 1. At Hillview and Ennis Farms the scheme would be raised on embankment, while at NFH it would be in approximately 4m cutting. In all cases, vegetation would be removed and the scheme would initially be the prominent element in the view. By year 15, woodland planting would thoroughly filter views of the scheme at Hillview Farm, reducing effects down to slight adverse insignificant. Woodland planting would also mitigate effects at NFH, reducing the effects for these receptors down to moderate adverse and significant. Copses would offer intermittent filtering within views from Ennis Farm, but the level of change would only be reduced slightly and effects would remain at slight adverse and insignificant.

7.11.42 Workers at Trevissome Business Park (VP 3) would experience an increased enclosure of views to the northwest due to the embankments of the proposed Chiverton junction, resulting in moderate adverse effects. Blocks of woodland planting would reduce the adverse effects to slight adverse insignificant by year 15.

*Effects on users of visitor accommodation*

- 7.11.43 In year 1, the scheme would become a noticeable element for users of holiday accommodation at NFH (VP 13), due to the removal of woodland. This would result in moderate adverse significant effects. Deciduous woodland planting would have reaching heights of 7m by year 15, heavily filtering views of the scheme, and resulting in a decrease to slight adverse effects.

*Effects on heritage receptors*

- 7.11.44 The year 1 effects on barrows are predicted to range from moderate to large adverse significant. The moderate adverse effects at Bowl Barrow 1016105 (VP 5) and the large adverse effects at Bowl Barrow 1016103 (VP 6) would be diminished to slight adverse and moderate adverse respectively by year 15 through planting of deciduous woodland, which would partially obscure the scheme from view. At the Barrow Cemetery at Carland Cross (1016888, 1017050, 1020758) (VP 27), large adverse year 1 effects would be not be noticeably mitigated by planting proposed at this location, due to the low height of plants required to fit in with the landscape character. Year 15 effects would therefore remain at large adverse for these receptors.
- 7.11.45 Changes to the views to and from NFH and attached wall Grade II listed buildings (VP 14) would not be noticeable in year 1 or 15, and would therefore result in no change.
- 7.11.46 People enjoying the views to and from Chyverton Park Lodge and associated walls and Gateposts Grade II listed buildings (1136926) (VP 16) would only be partially filtered by existing deciduous planting in year 1, resulting in moderate adverse and significant visual effects. This planting would have been reinforced through mitigation planting, decreasing the effects to slight adverse and insignificant by year 15.
- 7.11.47 Due to the distance between the scheme and the heritage assets (Bowl Barrow [1016443], CWDM WHS A7 St Agnes, and St Agnes Heritage Coast) at St Agnes Beacon (VP 29), receptors of views here would experience only slight adverse and insignificant change in year 1 and year 15.



**Table 7-13 Summary of residual visual operational effects**

VP	Visual receptor	Receptor sensitivity	Mitigation and level of change at summer year 15	Residual effect
1	Users of bridleways 301/10/1 & 301/10/3 enjoying the visual setting of the heritage asset – CWDM WHS A6i Gwennap Mining District	High	Negligible beneficial	Slight beneficial and insignificant
	Transport receptors along the Blackwater Bypass of the A30	Low		Slight beneficial and insignificant
2	Users of services at Chiverton Cross	Low	Minor beneficial	Slight beneficial and insignificant
3	Workers at Trevisson Business Park	Low	Moderate adverse	Slight adverse and insignificant
	Transport receptors using the A3075 near Trevisson Business Park	Low		Slight adverse and insignificant
4	Road users enjoying the views across the landscape, within which the tower of Grade II listed St Peter's Church and the nearby – Four Burrows Barrow Cemetery (1016054).	Moderate	Minor adverse	Slight adverse and insignificant
5	Users of Byway 314/66/1	Moderate	Negligible adverse	Slight adverse and insignificant
	People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016105).	High		Slight adverse and insignificant
6	Residential receptors at Callestick Vean (south)	High	Minor adverse	Moderate adverse and significant
	Pedestrians and equestrians using bridleway 314/64/1	Moderate		Slight adverse and insignificant
	People enjoying the views to and from nearby heritage asset – Bowl Barrow (1016103).	High		Moderate adverse and significant
	Transport receptors using the B3284 near Callestick Vean (south)	Low		Slight adverse and insignificant
7	Residential receptors at Creegmeor Farm	High	Minor adverse	Moderate adverse and significant
	Pedestrians and equestrians using bridleway 314/65/1	Moderate		Slight adverse and insignificant
8	Transport receptors along the B3284	Low	Minor adverse	Slight adverse and significant

VP	Visual receptor	Receptor sensitivity	Mitigation and level of change at summer year 15	Residual effect
	Residential receptors at Hillview Farm	High		Moderate adverse and significant
	Representative of views of outdoor workers at Hill View Farm	Moderate		Slight adverse and insignificant
9	Pedestrians and equestrians using bridleway 309/3/1	Moderate	Minor adverse	Slight adverse and insignificant
10	Residential receptors at Nanteague Farm	High	Moderate adverse	Large adverse and significant
11	Pedestrians using footpath 314/67/1	Moderate	Minor adverse	Slight adverse and insignificant
12	Residents at Marazanvose	High	Moderate adverse	Moderate adverse and significant
	Transport receptors along the existing A30 near Marazanvose	Low		Slight adverse and insignificant
13	Residential receptors at the bungalow at NFH	High	Minor adverse	Moderate adverse and significant
	Users of holiday accommodation at NFH	Moderate		Slight adverse and insignificant
14	Residential receptors at NFH	High	No change	Neutral
	People enjoying views to and from NFH and attached wall Grade II listed buildings (1136610).	Moderate		Neutral
15	Pedestrians using footpath 319/16/1	Moderate	Moderate adverse	Moderate adverse and significant
	Representative of views of outdoor workers at NFH.	Moderate		Moderate adverse and significant
16	People enjoying the views to and from Chyverton Park Lodge and associated walls and Gateposts Grade II listed buildings (1136926).	Moderate	Minor adverse	Slight adverse and insignificant
	Residential receptors at Chyverton Park Lodge	High		Moderate adverse and significant
	Transport receptors along the local road near Chyverton Park	Low		Slight adverse and insignificant
17	Pedestrians and equestrians using bridleway 319/9/1	Moderate	Minor adverse	Slight adverse and insignificant
18	Pedestrians using Footpath 319/3/1	Moderate	Negligible adverse	Slight adverse and insignificant

VP	Visual receptor	Receptor sensitivity	Mitigation and level of change at summer year 15	Residual effect
19	Pedestrians using the footpath near Church Lane	Moderate	Minor adverse	Slight adverse and insignificant
	Transport receptors along the existing A30	Low		Slight adverse and insignificant
20	Residential receptors at Polstain Farm	High	Minor adverse	Moderate adverse and significant
	Cyclists using NCR 32 near Herver Lane	High		Moderate adverse and significant
	Transport receptors along High Road and Herver Lane	Low		Slight adverse and insignificant
21	Residential receptors at Zelah Hill Cottage, Mount Pleasant, and Tregorlands	High	Minor adverse	Moderate adverse and significant
	Transport receptors on the existing A30 near Zelah Hill	Low		Slight adverse and insignificant
22	Cyclists using NCR 32 link on the unclassified local road	High	Minor adverse	Moderate adverse and significant
	Residential receptors at Honeycombe Farm	High		Moderate adverse and significant
	Transport receptors on the unclassified local road near Honeycombe Farm	Low		Slight adverse and insignificant
23	Transport receptors along the Quiet Lane near Pennycomequick	Moderate	Minor adverse	Slight adverse and insignificant
	Residential receptors at Pennycomequick	High	Negligible adverse	Slight adverse and insignificant
24	Residential receptors at Journey's End, Racland House, and Four Winds	High	Moderate adverse	Large adverse and significant
	Transport receptors along the existing A30 near Newlyn Downs	Low		Slight adverse and insignificant
25	Representative of views of recreational users of Newlyn Downs.	Moderate	Minor adverse	Slight adverse and insignificant
	Pedestrians using footpath 324/10/1	Moderate		Slight adverse and insignificant
26	Representative of views of walkers and other recreational users of Newlyn Downs.	Moderate	Moderate adverse	Moderate adverse and significant

VP	Visual receptor	Receptor sensitivity	Mitigation and level of change at summer year 15	Residual effect
27	People enjoying the views to and from nearby heritage assets – Barrow Cemetery at Carland Cross (1016888, 1017050, 1020758).	High	Moderate adverse	Large adverse and significant
	Users of open space land at Carland Quarry	Moderate	Major adverse	Large adverse and significant
28	Transport receptors along the unclassified local road.	Low	Negligible adverse	Slight adverse and insignificant
29	Pedestrians using footpath 318/63/2 and pedestrians and equestrians using bridleways 318/63/1 & 318/63/3 within the Cornwall AONB, the Heritage Coast and those enjoying views to and from nearby heritage assets – Bowl Barrow (1016443), and CWDM WHS A7 St Agnes.	High	Negligible	Slight adverse and insignificant
30	Residential receptors at dwellings within Silverwell.	High	Moderate adverse	Large adverse and significant
	Transport receptors on the local road near Silverwell,	Low		Slight adverse and insignificant
31	Transport receptors on the designated Quiet Lane near Ennis Farm.	Moderate	Moderate adverse	Moderate adverse and significant
	Residential receptors at Ennis Farm and Higher Ennis Farm.	High	Minor adverse	Moderate adverse and significant
	Representative of views of outdoor workers at Ennis Farm.	Moderate		Slight adverse and insignificant

## 7.12 Monitoring

- 7.12.1 Significant pre-mitigation operational effects are predicted on several visual receptors and the landscape character of the Newlyn Downs character area.
- 7.12.2 Landscape mitigation has been designed to address these effects where possible and its effectiveness relies on the planting measures thriving and growing to the extent that they become established and effective as mitigation over a period of around the first fifteen years following construction.
- 7.12.3 Beyond the first 24 month contractor aftercare period, management responsibilities would fall to the relevant highways authority. Highways England would be responsible for highways land associated with the A30 trunk road and Cornwall Council would look after the soft estate associated with the non-trunk road sections of the scheme. Management of the soft estate in either case up until year 15 (2038) would be necessary in accordance with normal highway soft estate management practices, to ensure that the planting does establish. Ongoing management activities and inspections during the first five years in particular would provide the opportunity to identify any further work or measures required to deliver the required level of mitigation.

## 7.13 Summary

Table 7-14 Summary impact table

Receptor	Range of impact
<b>Construction effects</b>	
<i>Landscape</i>	
The features and overall character of the landscape within the order limits.	Direct and significant moderate adverse, but temporary and reversible landscape effects
CA 11 – Redruth, Camborne, and Gwennap	Direct, but insignificant slight adverse, but temporary and reversible landscape effects.
CA 14 – Newlyn Downs	
<i>Visual</i>	
<ul style="list-style-type: none"> <li>Residential receptors at Marazanvose (VP 12) and Silverwell (VP 30); and</li> <li>People enjoying the views to and from the Barrow Cemetery at Carland Cross (1016888, 1017050, 1020758) (VP 27).</li> </ul>	Significant short-term and reversible large adverse visual effects.
<ul style="list-style-type: none"> <li>Residential receptors at Callestick Vean (south) (VP 6), Creegmeor Farm (VP 7), Hillview Farm (VP 8), Nanteague Farm (VP 10), the bungalow at NFH (VP 13), Chyverton Park Lodge (VP 16), Polstain Farm (VP 20), Zelah Hill Cottage and Mount Pleasant (VP 21), Pennycomequick (VP 23), Journey's End, Racland House, and Four Winds (VP 24), and Ennis Farm and Higher Ennis Farm (VP 31)</li> </ul>	Significant short-term and reversible moderate adverse visual effects.

<ul style="list-style-type: none"> <li>• Pedestrians and equestrians using bridleway 314/64/1 (VP 6), bridleway 309/3/1 (VP 9), footpath 314/67/1 (VP 11), bridleway 319/9/1 (VP 17), footpath 319/16/1 (VP 15), and in Newlyn Downs Open Access Land (VP 26);</li> <li>• Cyclists using NCR 32 near Herver Lane (VP 20);</li> <li>• Transport receptors along the Quiet Lane near Pennycomequick (VP23);</li> <li>• People enjoying views to and from the Bowl Barrow (1016103) (VP 6); and</li> <li>• Outdoor workers at NFH (VP 15).</li> </ul>	
<p><b>Residual effects</b></p>	
<p><i>Landscape</i></p>	
<p>The features and overall character of the landscape within the order limits.</p>	<p>Direct but insignificant slight adverse, residual landscape effects.</p>
<p>CA 11 – Redruth, Camborne, and Gwennap</p>	
<p>CA 14 – Newlyn Downs</p>	
<p><i>Visual</i></p>	
<ul style="list-style-type: none"> <li>• Residential receptors at Nanteague Farm (VP 10), Journey’s End, Racland House, Four Winds (VP 24), and Silverwell (VP 30),</li> <li>• users of the Open Access Land near Carland Quarry (VP 27);</li> <li>• People enjoying views to and from the Barrow Cemetery at Carland Cross (1016888, 1017050, 1020758) (VP 27).</li> </ul>	<p>Significant long-term large adverse residual visual effects.</p>
<ul style="list-style-type: none"> <li>• Residential receptors at Callestick Vean (south) (VP 6), Creegmeor Farm (VP 7), Hillview Farm (VP 8), Marazanvose (VP 12), the bungalow at NFH (VP 13), Chyverton Park Lodge (VP 16), Polstain Farm (VP 20), Zelah Hill Cottage, Mount Pleasant, and Tregorlands (VP 21), Honeycombe Farm (VP 22), Ennis Farm and Higher Ennis Farm (VP 31);</li> <li>• Pedestrians and equestrians using footpath 319/16/1 (VP 15), Newlyn Downs Open Access Land (VP 26);</li> <li>• Cyclists using NCR 32 near Herver Lane (VP20) and NCR 32 link on the unclassified local road (VP22);</li> <li>• People enjoying the views to and from nearby heritage assets –Bowl Barrow (1016103) (VP 6);</li> <li>• Transport receptors on the designated Quiet Lane near Ennis Farm (VP 31); and</li> <li>• Outdoor workers at NFH (VP 15)</li> </ul>	<p>Significant long-term moderate adverse residual visual effects.</p>

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