

A30 Chiverton to Carland Cross TR010026

6.2 ENVIRONMENTAL STATEMENT CHAPTER 12 PEOPLE AND COMMUNITIES

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**A30 Chiverton to Carland Cross
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**6.2 ENVIRONMENTAL STATEMENT
CHAPTER 12 PEOPLE AND COMMUNITIES**

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12 People and Communities

12.1 Introduction

12.1.1 This Chapter of the ES provides an assessment of the potential construction and operational effects of the proposed A30 Chiverton to Carland Cross (the “scheme”) on people and communities. In order to assist the reader, the Chapter is structured under the following impact areas (receptor groups)¹:

- **All Travellers** – including potential effects on vehicle travellers, walkers, cyclists and horse-riders;
- **Communities** – including potential effects on employment, existing settlements, access to services/green space, community safety, health (a full assessment of health has been undertaken with a Health Impact Assessment, which can be found in Volume 6 Document Ref 6.4 ES Appendix 12.1 ‘Health Impact Assessment’) and residential amenity; and
- **Land and Property** – including potential effects on land and property to be used or acquired, allocated development land, tourism and recreation receptors and commercial business receptors.

12.2 Competent Experts

12.2.1 The People and Communities lead is a Chartered Town Planner who holds a BSc in City and Regional Planning and an MSc in Regeneration Studies, both from the Cardiff University School of City and Regional Planning, the co-author is a Chartered Town Planner who holds a BSc in Human Geography and an MSc in Regeneration Studies, both from the Cardiff University School of City and Regional Planning. Full details on both are provided in Volume 6 Document Ref 6.4 Appendix 1.1.

12.2.2 A full assessment of health, which can be found in **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1), has been undertaken by an additional competent expert and whose experience is outlined in that document.

12.3 Potential Impacts

12.3.1 **The Project** (Volume 6 Document Ref 6.2 ES Chapter 2) describe the scheme that has been assessed, taking into account design, mitigation and enhancement measures.

12.3.2 This section of the Chapter considers the potential impacts from the proposed scheme on the broad receptor groups identified above. The subsequent baseline and assessment sections of this Chapter then consider the current context within the study area in respect of potential effects on the receptor groups identified.

12.3.3 In considering amenity effects on receptors, the assessment relies upon the information presented within other relevant Chapters of this ES to provide an ‘in combination’ assessment of the potential noise and vibration, air quality and visual impacts (Volume 6 Document Ref 6.2 ES Chapters 11, 5 and 7 respectively) that may result in a wider amenity effect on people and communities.

¹ Taking into account the relevant Design Manual for Roads and Bridges (DMRB) guidance where there is an appropriate approach

12.3.4 In considering the significance of potential effects on receptors, consideration has been given to design, mitigation and enhancement measures associated with the scheme as described in Section 12.10.

All travellers

12.3.5 This includes an assessment of potential impacts arising from the scheme on vehicle travellers, walkers, cyclists and horse-riders (WCHs) as follows:

- a) Construction and operational related effects on drivers' views from the road;
- b) Construction and operational related effects on driver stress;
- c) Potential effects on bus travellers during both construction and operation;
- d) Potential effects on WCHs during construction including severance of key routes, any diversions required and associated impacts in relation to journey length and amenity; and
- e) Potential effects on WCHs during operation including any severance or diversions to key routes and the potential for enhancements to the WCH network due to new overbridges and underbridges. Consideration has also been given to journey length effects and amenity impacts.

Communities

12.3.6 This includes an assessment of potential impacts on a number of broad receptor groups, including employment, existing settlements, access to services/green space, community safety, health, and amenity as follows:

- a) Potential construction employment opportunities which could be generated by the proposed scheme and the associated local economic benefits;
- b) Potential indirect or induced effects associated with the construction project and construction workforce in the local area (e.g. supply chain and spend in the local area);
- c) Potential construction and operational effects on settlements, including access and potential severance effects;
- d) Potential construction and operational effects in relation to access to services/green space; and
- e) Potential effects on community safety, health and amenity within local communities during both construction and operation.

12.3.7 A more detailed consideration of direct and indirect effects on different groups in relation to population and health is provided in **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1).

Land and property

- 12.3.8 This includes potential impacts on land and property to be used or acquired, allocated development land, tourism and recreation receptors and commercial business receptors as follows:
- a) Construction and operational effects on commercial property and business receptors;
 - b) Construction and operational effects on agricultural land (temporary and permanent land take requirements);
 - c) Construction and operational effects on agricultural receptors/farm holdings;
 - d) Potential effects on allocated land/future development land;
 - e) Construction and operational effects on tourism and recreational facilities within the vicinity of the proposed scheme, including direct effects on the receptor as well as indirect effects associated with any impacts on users of the receptors (e.g. amenity/perceived effects); and
 - f) Potential effects on other land (e.g. open space land) during both construction and operation.

12.4 Study area

- 12.4.1 The study area for each impact area has been defined through consideration of the potential effects on key receptor groups as described above and the area over which an effect is likely to be experienced. This has been informed through both consideration of direct effects which will largely be limited to the extent of the proposed scheme, and indirect effects which could be experienced over a wider area.
- 12.4.2 It should be noted that the relevant Design Manual for Roads and Bridges (DMRB) guidance does not specify a standard study area for the assessment of effects on all travellers but refers to a requirement to identify existing and proposed PRoW which may be affected. No other adopted guidance exists which would specify study areas for the receptors considered within the Chapter. As such, all study areas have been defined based on professional judgement, best practice and in agreement with stakeholders including Cornwall Council, see the relevant **Statement of Common Ground**, (Volume 7 Document Ref 7.4).
- 12.4.3 For 'All Travellers', an appropriate study area has been agreed comprising a 5km extent from the proposed scheme's centre line for indirect effects. This area reflects associated guidance and aims to capture the potential impacts on drivers, severance and amenity. ES Figure 12.1 (Volume 6 Document Ref 6.3) shows the 5km extent in the scheme's context. Direct effects are considered for the existing A30 and routes interacting with (passing through) the proposed scheme boundary (Order limits) as has been identified for construction and operation (those which would be directly impacted by access changes).

- 12.4.4 For 'Communities', potential indirect and amenity effects on people, access to services/green space, community safety, and health receptors within 1km of the proposed scheme have been considered. This study area is considered appropriate to capture the local receptors that would most likely experience any result of changes in travel conditions and amenity along the existing and proposed A30 both during construction and operation. Direct effects are considered for the receptors situated within the Order limits (those which would be directly affected in terms of their operation).
- 12.4.5 For 'Land and Property', potential indirect effects on land and property to be used or acquired to accommodate the scheme, allocated land, tourism and recreation facilities and commercial business receptors within 2km of the proposed scheme have been considered. This study area is considered appropriate to capture the local and regional nature and scale of receptors that would most likely experience benefits or dis-benefits to their temporary and/or continued use because of changes in travel conditions and amenity along the existing and proposed A30 both during construction and operation. Direct effects are considered for the receptors situated within the proposed Order limits (those which would see their function or capacity directly affected).
- 12.4.6 In summary, the study areas considered for each of the impact areas that are taken into account within this Chapter are summarised in Table 12-1.

Table 12-1 Study areas

Impact area	Study area for Indirect or Amenity Effects	Study area for Direct Effects
All Travellers	Existing and proposed routes located within 5km from the alignment of the proposed A30.	The existing A30 and existing and proposed routes passing within the Order limits, both during construction and operation, required for the proposed A30.
Communities	Receptors located within 1km from the alignment of the proposed A30.	Receptors located within the Order limits, both temporary and permanent, required for the proposed A30.
Land and Property	Receptors located within 2km from the alignment of the proposed A30.	Receptors located within the Order limits, both temporary and permanent, required for the proposed A30.

12.5 Assessment Methodology

- 12.5.1 The significance of an environmental effect is a function of the 'value' of the receptor and the 'magnitude' or 'scale' of the impact, which are considered further below.
- 12.5.2 There is no definitive guidance on significance criteria for the assessment of effects on 'People and Communities'. As such, the assessment methodology draws from published guidance where appropriate, and existing industry accepted practice where no guidance exists. For example, certain elements of the assessment methodology have been developed in accordance with the following DMRB guidance, where this provides an appropriate approach:
- Volume 11, Section 2, Part 5 (HA 205/08) 'Assessment and Management of Environmental Effects';
 - Volume 11, Section 3, Part 6 – Land Use;
 - Volume 11, Section 3, Part 8 – Pedestrians, Equestrians, Cyclists and Community Effects; and
 - Volume 11, Section 3, Part 9 – Vehicle Travellers.
- 12.5.3 As set out in **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1), the assessment of health is a multidisciplinary process designed to identify and assess the potential health outcomes (both adverse and beneficial) of a proposed project, plan or programme and to deliver evidence-based recommendations that optimise health gains and reduce or remove potential negative impacts or inequalities. **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1) sets out the scope of the Health Impact Assessment and the specific methodology that was followed including the study area, the study population, information and data sources that were consulted, assessment criteria and assessment outcomes.
- 12.5.4 Where receptors cannot be assessed within this guidance a bespoke methodology has been developed and utilised, using professional judgement and best practice where necessary, which is explained below where appropriate.

Value of Receptor

- 12.5.5 The value or sensitivity of a receptor relates to the scope for the receptor to overcome an effect. For example, a tourism receptor that is small in scale, typically attracts regional visitors and that could easily move elsewhere (such as a campsite) would have a lower sensitivity than a facility that is large in scale, typically attracts national visitors and which could not move elsewhere (such as a World Heritage Site).
- 12.5.6 Sensitivity is also a key dimension to the assessment of indirect and amenity effects. This can be illustrated by considering an adverse visual effect on two different receptors². For a tourism business the visual effect could have a negative effect on activity, whereas for a distribution company the effect would not be expected to affect business activity. As such, the sensitivity for the amenity assessment is essentially a binary choice; either a resource is sensitive to amenity effects or it is not.

² When considering indirect amenity, the assessment does not include individual residential properties unless they have a business function which is considered to have an amenity value (e.g. B&B accommodation).

12.5.7 Where appropriate, sensitivities have been applied with reference to DMRB and IEMA guidance criteria³. Where no specific guidance for the assessment exists, criteria has been defined using professional judgement and knowledge of the context and potential effects. Receptor sensitivity is thus applied as follows:

Table 12-2 Receptor Sensitivity

Receptor Sensitivity	Criteria
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Magnitude of Impact

- 12.5.8 The magnitude of an effect represents its severity. Key factors to be considered when assessing magnitude include the extent (e.g. scale of impact, or number of groups and/or individuals⁴ or businesses affected) and the value of the resource. For example, an effect involving the permanent closure of a Public Right of Way (PRoW) without substitution or re-provision would have a higher magnitude than a permanent closure with a new and appropriate diversion.
- 12.5.9 Only those receptors deemed to be situated within the Order limits are expected to experience direct effects. This approach helps ensure that potential direct construction effects (e.g. where receptors interact with construction access routes and construction compounds) and potential direct operational effects (e.g. where a receptor interacts with the proposed scheme alignment) are considered.
- 12.5.10 The approach is considered suitable for assessing both direct effects (where the proposed scheme directly encroaches on a resource) and other effects such as severance/isolation (where the proposed scheme effects access to a resource). However, a different approach is taken when considering indirect amenity effects on a resource/receptor.
- 12.5.11 For receptors situated outside of the Order limits, much of the assessment explores potential indirect and amenity effects, including impacts on access and ongoing use of a receptor. An indirect amenity effect relates to the experience users have when using a resource for its intended function. For example, a hotel renowned for its views and gardens would have a positive amenity value. The amenity value of a resource may be affected by a combination of factors including changes in air quality, noise and vibration and visual impacts.
- 12.5.12 Magnitude is applied as follows. This table presents criteria for both direct and indirect and amenity effects.

³ DMRB Volume 11, Section 3, Part 8 and Part 9

⁴ For the purposes of the assessment individuals refers to users of a receptor/resource (e.g. a PRoW or community facility) and does not include individuals in terms of residential properties as an example.

Table 12-3 Magnitude of effects

Magnitude of Impact	Typical criteria descriptions for direct effects	Typical criteria descriptions for indirect and amenity effects
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse).	Two or more residual significant effects are identified where both are major in nature.
	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).	
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).	Two residual significant effects are identified with one being major in nature.
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).	
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).	Two residual significant effects are identified with both being moderate or less in nature.
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).	
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).	One residual or no significant effects identified.
	Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).	
No change	No loss or alteration of characteristics, features or elements; No observable impact in either direction.	No residual effects identified

Assessment of Significance

- 12.5.13 The significance of effects is a function of the magnitude of the impact and the sensitivity of the receptor.
- 12.5.14 Given the broad nature of this Chapter and the lack of definitive guidance on assessing many of the potential impacts, the evaluation of significance takes into account the justifications provided for attributing sensitivity and magnitude. This often utilises professional judgement in reaching a conclusion about significance.
- 12.5.15 The significance of impacts has been determined as follows:

Table 12-4 Assessing significance of effect

		Magnitude of Change				
		No change	Negligible	Minor	Moderate	Major
Environmental Value (Sensitivity)	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or Large
	High	Neutral	Slight	Slight or moderate	Moderate or Large	Large or Very Large
	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large

- 12.5.16 For the purposes of this EIA, significant effects are those where significance is deemed to be 'moderate' or greater, overall.
- 12.5.17 It is important to note that the assessment of effects and the associated decision making as to whether an effect is significant or not, takes into account design, mitigation and enhancement measures where identified. Such measures are considered in section 12.10 and as part of the assessment of effects (sections 12.11 to 12.13) of this Chapter 12.

12.6 Legislative and policy framework

- 12.6.1 This section of this Chapter presents the legislation and policy of most relevance to the assessment, and includes a summary of how the assessment has responded to the relevant policy requirements as set out below.
- 12.6.2 A more detailed and wider review of the legislative and policy framework is provided in **Legislative and policy framework** (Volume 6 Document Ref 6.4 ES Appendix 12.2) of this ES.
- 12.6.3 This section does not provide a review of the legislation and policy support for the scheme itself. That is addressed within the separate **Planning Statement** (Volume 7 Document Ref 7.1) that accompanies the application for a Development Consent Order.
- 12.6.4 A more detailed policy context in relation to the scheme and health and wellbeing is provided in **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1).

Table 12-5 Legislation and Policy

Relevant document	Application to the scheme
Countryside and Rights of Way Act 2000	The Act provides a new right of public access on foot to areas of open land. The Act also provides safeguards which consider the needs of landowners and occupiers, and of other interests, including wildlife. The Act improves the rights of way legislation by encouraging the creation of new routes and clarifying uncertainties about existing rights.
National Road and Rail Networks: National Policy Statement (NN NPS) (December 2014)	The Government's vision and strategic objectives for national networks set out in the NN NPS includes 'supporting a prosperous and competitive economy', and specifically: Networks with the capacity and connectivity to support national and local economic activity and facilitate growth and create jobs; and Networks which join up our communities and link effectively to each other. Paragraph 3.3 requires that 'reasonable opportunities to deliver environmental and social benefits as part of schemes' should be considered and that environmental and social impacts should be mitigated in line with the principles set out in the National Planning Policy Framework (NPPF) and the Government's planning guidance.
Road Investment Strategy: 2015 – 2020 (2014)	The Strategy includes a commitment to improve the A30 between Chiverton and Carland Cross to dual carriageway standard. It sets out the vision to deliver safer and more reliable journeys for road users of the strategic road network, to create economic, environmental and community benefits.
Revised National Planning Policy Framework (2018)	The NPPF seeks a transport system in favour of sustainable modes and which gives choice to people on how they travel, while recognising that opportunities to maximise sustainable transport solutions will vary from urban to rural areas. The draft revised policy on transport retains the priority on reducing the need to travel and policies in favour of sustainable transport modes.
National Planning Practice Guidance (PPG) (2014)	The Guidance states that existing open space should be taken into account when considering development proposals.
Government White Paper: Healthy Lives, Healthy People (2010)	The white paper outlines the Government's commitment to helping people live longer, healthier and more fulfilling lives, while improving the health of the poorest, fastest.
Highways England Cycling Strategy	The Cycling Strategy sets out how the planned roads improvements programme will provide integrated schemes which improve cycling facilities, contributing towards the development of an integrated, safe, comprehensive and high quality cycling network.
Highways England Accessibility Strategy	The vision for accessibility focuses on supporting road users' journeys, including pedestrians, cyclists, equestrians, those with disabilities (such as users with mobility or sensory impairments) and other vulnerable users, while delivering longer-term benefits for communities and users alike. It aims to address the barriers that roads can sometimes create, help expand people's travel choices, enhance and improve network facilities, and make every day journeys as easy as possible.

Relevant document	Application to the scheme
The Cornwall Local Plan Strategic Policies 2010-2030 (adopted 2016)	Policy 16: Health and Wellbeing of the Local Plan aims to improve the health and wellbeing of Cornwall's communities, residents, workers and visitors. Policy 21: Best Use of Land and Existing Buildings of the Local Plan aims to ensure the best and most efficient use of land, safeguarding it where appropriate. Policy 25: Green Infrastructure of the Local Plan states that development proposals should contribute to an enhanced, connected and functional network of habitat, open spaces and waterscapes. Policy 27: Transport and Accessibility of the Local Plan aims for major developments to ensure a resilient and reliable transport system for people, goods and services.
Cornwall Local Plan Strategic Policies 2010-2030: Community Network Areas Sections	<p>The A30 scheme is within both PP6 Truro and Roseland and PP7 St Agnes and Perranporth Community Network Areas. Specific objectives of relevance include:</p> <ul style="list-style-type: none"> • Objective 2 Tourism and Employment – Support the tourist industry and enable other employment opportunities; • Objective 3 Rural Businesses – Protect and ensure the sustainability of rural shops and businesses; • Objective 4 Services and Public Transport – Co-ordinate a strategic approach to provision of services and public transport to encourage self-containment and sustainable transport; • Objective 4 Sustainable Transport – enable the use of more sustainable transport modes and reduce congestion through the provision of additional transport infrastructure and ensuring sustainable transport is designed into new development; • Objective 6 Community Facilities – ensure that facilities, including health, leisure, education and sports facilities, are provided to support new development and address existing deficiencies. • Objective 8 Natural and Historic Environment – maintain and enhance the area's heritage and environmental assets for the benefit of the local community and to enhance the area's tourism offer.
The Truro and Kenwyn Neighbourhood Development Plan	The Plan is keen to ensure that there is fair access to community centres, services and facilities across the whole of the Plan area. It recognises that congestion impacts Truro, with resulting air quality issues on the A390. Policy T3 Sustainable Transport states that development should contribute to new cycle and walking routes and protect and enhance existing routes, linking to them wherever possible.
Connecting Cornwall 2030 (2011)	It aims to provide a transport system which is resilient, supports communities to live locally, encourages an active lifestyle, improves individual wellbeing and provides equal access to services. The Plan notes that congestion and delays caused by the A30 has an adverse impact on the Cornish economy.

12.7 Baseline Conditions

12.7.1 The baseline conditions for the scheme are presented below under the key impact areas.

All travellers

12.7.2 The baseline for all travellers is divided between vehicle travellers (car and bus users) and walkers, cyclists and horse-riders (WCH).

12.7.3 Volume 6, Document Ref 6.3, ES Figure 12.1 shows the 5km study area, with existing WCH routes and Volume 6, Document Ref 6.3, ES Figure 12.4 shows Public Rights of Way (PRoW) and local WCH routes.

Vehicle travellers

12.7.4 The A30 provides the main road connection between Cornwall and other regions of the south of England and runs between London and Land's End, covering some 284 miles. More locally to the South West, the road also provides a key connection between local villages and towns including Truro and Redruth.

12.7.5 The existing A30 between Chiverton and Carland Cross is single carriageway, with three at grade junctions with B roads, thirteen junctions with minor roads, and numerous connections from farm tracks, entrances to dwellings and businesses.

12.7.6 There are no railway stations within 5km of this section of the A30.

12.7.7 Bus routes and facilities are shown on Volume 6 Document Ref 6.3 ES Figure 12.8, including potential diversion routes given their interaction with the proposed A30 scheme.

12.7.8 In summary, seven bus routes stop along the existing A30 between Chiverton and Carland Cross, all of which connect the north of the County to Truro. Bus stops are located on the A390 about 200m south of Chiverton, at Marazanvose, in close proximity to the Marazan Farm Campsite and Marazanvose Farm, and at Zelah on the approach roads and immediately before the junction with the A30. The sensitivity of bus travellers is considered to be low given their local nature and potential for substitution.

12.7.9 Views from the road, defined by DMRB as the 'extent to which travellers, including drivers, are exposed to different types of scenery through which a route passes', is a consideration of the effect on vehicle travellers. Travelling from west to east, the current views from the road can be summarised as follows, with terminology taken from relevant DMRB guidance⁵:

- South of Chiverton – the road is at a higher elevation in comparison to the surrounding landscape and views are therefore over longer distances, providing drivers with an 'open view'.
- South of Marazanvose – the road passes through undulating topography and provides drivers with 'intermittent views', restricted by hedgerows and vegetation. Occasionally drivers experience glimpsed views over a longer distance.

⁵ DMRB Volume 11, Section 3, Part 9

- Area around Zelah – the road descends into a valley and views are restricted to either side by high hedgerows or bunds either side of the cutting. This provides ‘restricted views’.
- Carland Cross – the road travels along a ridge and provides drivers with long distance views both north and south. Views are only occasionally interrupted by hedgerow features and the occasional isolated dwelling providing ‘open views’.

12.7.10 In general, and with reference to **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), the view from the current A30 provides a positive experience for drivers and the sensitivity of travellers in relation to views from the road is considered to be low.

12.7.11 In addition to views from the road, driver stress forms another key consideration of this assessment. According to DMRB, driver stress has three main components: frustration, fear of potential accidents, and uncertainty.

12.7.12 The identified transport related problems set out in the relevant transport reports (Volume 7 Document Ref 7.5) explain how capacity and resilience issues exacerbate adverse travel conditions, particularly at peak times, which will impact adversely on driver stress. It is explained how accidents and fear of accidents can add to driver stress. As explained further at paragraph 12.7.57, the existing section of A30 between Chybucca and Carland Cross experiences below UK average accident rates, whereas the section between Chiverton and Chybucca is nearly double the national average.

12.7.13 Relevant traffic and accident data has been collected, which shows:

- On average, more than 44,000 vehicles use the A30 between Chiverton and Carland Cross every day, with insignificant variation between the AM, PM and Inter Peak period – suggesting traffic volumes are relatively similar across the day.
- Average daily traffic flows over a year show peak months in July and August, which coincides with an increase in tourists visiting Cornwall in the summer.
- The latest available accident data is for 1 January 2012 to 31 December 2016 shows there were 111 accidents between Chiverton and Carland Cross, of these there was one fatality, 17 serious collisions and 93 slight collisions. Police records attribute two of those accidents involving cyclists and one involving a pedestrian only.

12.7.14 Taking the available data into account and acknowledging the more anecdotal data provided as a result of the consultation process with the public and other stakeholders (see section 12.8 of this Chapter 12 for more information), it is understood that:

- Current congestion forms a bottleneck, preventing reliable east to west journeys, particularly during peak periods and the summer tourist season.
- The frequency of junctions and the variation in speed of vehicles entering the road could be perceived as a potential hazard, and there is limited space for safe overtaking and for vehicles turning right off the A30.
- The local road network is known to be used by vehicles avoiding traffic on the A30 when there are delays.

12.7.15 There is also the potential for a road scheme to have a beneficial impact by relieving existing severance. DMRB Volume 11 Section 3 Part 8 provides guidance on the relief of severance, resulting from a scheme, through the reduction of vehicle traffic. Table 12-6 shows categories of relief from severance by reduction in existing traffic levels⁶ for rural areas, being appropriate for the study area.

Table 12-6 Categorising the Level of Relief from Severance

	Minor	Moderate	Substantial
Rural Area	60-75% ⁷	75-90% ⁸	90% ⁹

Walkers, Cyclists and Horse-riders

- 12.7.16 The existing A30 carriageway has a grass verge without any footway provision. Given the traffic volumes presented above, it is generally an intimidating environment for pedestrians due to the volume and speed of traffic. A 500m length of footway is available between Zelah and Mount Pleasant and pedestrian crossing points are provided at Chiverton Cross, Church Lane in Zelah, and Carland Cross. These are not formal crossings and pedestrians therefore have to navigate across the heavily trafficked road.
- 12.7.17 There are no dedicated facilities for cyclists along the A30 although the junctions at Chiverton Cross and Carland Cross provide some off-road links between arms. According to stakeholder engagement feedback (see section 12.8 and the **Consultation Report** at Volume 5 Document Ref 5.1/5.2), it is perceived that a number of road crossings are popular with cyclists, enabling north to south journeys.
- 12.7.18 PRow mapping data¹⁰ has been provided by Cornwall Council and has been taken to represent the definitive record of PRow in the study area. PRow potentially affected by the proposed A30 development were identified through examination of this data and site walkover work undertaken by the consultant team.
- 12.7.19 In addition to the definitive PRow network a number of local routes have been identified through both site work (e.g. picking up signed cycle routes), review of the National Cycle Network (NCN) map and through workshops and consultation events that have highlighted a number of routes used and valued by local people and groups (e.g. walking and cycling groups¹¹).

⁶ Relief of severance is not significant where traffic flows are already relatively low; the guidelines do not apply to roads with an existing Annual Average Daily Traffic (AADT) flow of fewer than 8,000 vehicles. However, where particularly vulnerable user groups are relieved from severance the description may need to be amended.

⁷ Where the existing road is passing through a village or on the perimeter of built up area.

⁸ Where the existing road substantially bisects a village or small town this figure may be halved.

⁹ Where the existing road substantially bisects a village or small town this figure may be reduced to 60%.

¹⁰ <https://www.cornwall.gov.uk/environment-and-planning/countryside/public-rights-of-way/public-rights-of-way-interactive-mapping/> and <https://www.cornwall.gov.uk/environment-and-planning/countryside/public-rights-of-way/definitive-map-and-statement/viewing-cornwalls-definitive-map-online/>

¹¹ See section 12.8 and the Consultation Report at Volume 5 Document Ref 5.1/5.2

- 12.7.20 Walking, Cycling and Horse-Riding surveys were undertaken at 13 locations along the A30 corridor focussing on crossing points such as overbridges or at key junctions. These surveys were carried out over three days, Friday-Sunday, 25-27 August 2017 between 7am and 7pm and recorded walking, cycling and horse-riding movements. In addition, and as part of their grading system for Gold, Silver and Bronze PRow, Cornwall Council has undertaken their own surveys of PRow in the study area. This includes information and criteria about the use, accessibility, connections to promoted national or regional trails, links to settlements and links to tourism attractions and public transport¹².
- 12.7.21 The results of the site surveys and Cornwall Council data and advice has helped inform an appraisal of the value of PRow and local routes. In turn, this has helped inform the proposed approach to assessment of those routes during construction and operation in relation to the proposed A30 scheme.
- 12.7.22 A significant amount of consultation has been undertaken to help develop the preferred route and its opportunities in relation to walkers, cyclists and horse-riders. This has involved a series of workshops with relevant stakeholders to help collect evidence and discuss options. A summary of stakeholder engagement is provided in the PRow Management plan within **Outline CEMP Annex M** (Volume 6 Document Ref 6.4 ES Appendix 16.1) and the **Consultation Report** (Volume 5 Document Ref 5.1/5.2.)
- 12.7.23 PRow that intersect with the proposed scheme and are therefore affected by works are shown on the Figures in **Annex A of Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1), which is the same as **ES Figure 12.4** (Volume 6 Document Ref 6.3) and they are summarised in Table 12-7.
- 12.7.24 In total, the scheme has the potential to effect 17 PRow as follows:
- 6 Byway Open to All Traffic (BOAT);
 - 6 Bridleways; and
 - 5 Footpaths.
- 12.7.25 As discussed above, Cornwall Council has designated their PRow in three categories (Gold, Silver or Bronze) according to their status and priority for attention¹³. They form the appropriate local maintenance priorities.¹⁴
- 12.7.26 Taking those categories and priorities into account, each PRow has been assigned a sensitivity value accordingly. Cornwall Council have explained that any new PRow would likely be given a Gold status.
- 12.7.27 It has been assumed that Gold status is of highest value and thus are assigned a medium sensitivity. Silver and Bronze are assigned low and negligible sensitivities respectively¹⁵. High sensitives are associated with National Trails or similar, of which there are not any in the study area.
- 12.7.28 The assumed sensitives have been agreed with Cornwall Council, as outlined in the Statement of Common Ground.

¹² See details at PRow Management Plan, Volume 6 Document Ref 6.4 ES Appendix 16.1 Outline CEMP Annex M

¹³ <https://www.cornwall.gov.uk/media/5830903/Cornwall-Council-Gold-Silver-and-Bronze-Criteria.pdf>

¹⁴ <http://www.cornwall.gov.uk/environment-and-planning/countryside/public-rights-of-way/local-maintenance-partnership-imp/>

¹⁵ It should be acknowledged that despite of assigned sensitives, Highways England has taken the approach to maintain or divert all PRow where possible and practicable.

Table 12-7 Existing PRoW that interact with the scheme

PRoW	Location	Cornwall Designation	Assumed sensitivity for assessment
BOAT 309/25/2	West of Chiverton Cross, running east-west between BOAT 309/25/3 and BOAT 309/25/4	Gold	Medium
BOAT 309/25/3	West of Chiverton Cross roundabout and BOAT 309/25/2	Gold	Medium
BOAT 309/25/4	West of Chiverton Cross roundabout running north – south	Gold	Medium
BOAT 309/25/5	West of Chiverton Cross roundabout running between BOAT 309/25/4 and BOAT 309/25/3	Gold	Medium
BOAT 309/25/6	West of Chiverton Cross roundabout running north – south from BOAT 309/25/4	Gold	Medium
BOAT 309/25/7	West of Chiverton Cross roundabout running north – south from BOAT 309/25/6	Gold	Medium
Bridleway 314/64/1	North – south from B3284 to Callestick Vean where it connects to Footpath 314/64/2	Silver	Low
Bridleway 314/65/1	North – South from existing A30 on track leading to Creegmeor Farm	Silver	Low
Bridleway 309/3/1	North – South from existing A30 to the B2384	Silver	Low
Footpath 314/67/1	East west between the existing A30 and Lower Ventongimps	Silver	Low
Footpath 319/16/1	South west from the A30 at Marazanvose and east at NFH	Gold	Medium
Bridleway 319/9/1	North – south to Hill House prior to running parallel with the existing A30 before joining with Footpath 319/1/2 and Bridleway 319/1/1 south of the existing A30	Gold	Medium
Bridleway 319/1/1	East – west across the existing A30 via an overbridge between Zelah Lane Farm and Footpath 319/1/2	Gold	Medium
Footpath 319/1/2	Meets the A30 and Bridleways 319/1/1 and 319/9/1 opposite Zelah Lane Farm.	Gold	Medium
Footpath 319/12/1	East of the A30 adjacent to Trevalso Cottage	Bronze	Negligible
Footpath 319/11/1	East – west south of the existing A30 at Pennycomequick and north of Honeycombe Farm	Bronze	Negligible
Bridleway 321/14/2	North – south adjacent to the A39 south of the Carland Cross roundabout	Gold	Medium

12.7.29 Table 12-8 includes other routes known to be used by walkers, cyclists and horse-riders, including Quiet Lanes and NCN routes.

12.7.30 In terms of sensitivity, it has been assumed that local routes are of low value given their informal/permissive nature. However, for routes of regional importance e.g. the National Cycle Network, it has been assumed that there will be a medium sensitivity. As explained previously, high sensitivities are associated with National Trails or similar, of which there are not any in the study area.

Table 12-8 Local Routes that intersect with the scheme

Local Route	Location	Assumed sensitivity for assessment
Quiet Lane	Route crosses current A30 at Chybucca	Negligible
Quiet Lane	Route crosses current A30 west of NFH	Negligible
National Cycle Network – Route 32 (the Cornish Way)	Route crosses the existing A30 at Chiverton Lodge.	Medium
Unnamed path (not designated on Definitive Map)	Crosses the existing A30 from the southern end of Church Lane in Zelah	Negligible
Quiet Lane	South of Trevalso Farm	Negligible
Link to National Cycle Network – Route 32 (the Cornish Way)	Route crosses the existing A30 at Pennycomequick	Negligible
Quiet Lane	South East of Pennycomequick	Negligible

12.7.31 When significance of effects is considered, a temporary impact during construction is considered to have a reduced impact to that of a permanent effect during operation. For example, any local management of a route during construction with low sensitivity, which will have a negligible magnitude, would likely result in a neutral effect rather than a slight adverse given its temporary nature.

Communities

12.7.32 This section presents the baseline in relation to the main communities located within the study area and the socio-economic and health profile of the local population.

12.7.33 Volume 6 Document Ref 6.3 ES Figure 12.7 shows the community features located along the A30 Chiverton to Carland Cross.

Settlements, access to services/green space

12.7.34 The main villages located along the existing A30 are described below with reference to the Settlement Strategy Update produced by Cornwall Council¹⁶.

12.7.35 The A30 Chiverton to Carland Cross serves low numbers of residential properties and businesses at and around Chiverton, Marazanvose, Zelah and Carland Cross in a predominantly rural location.

12.7.36 Blackwater is the largest of the settlements in the study area, situated around 1.5km to the South West of Chiverton. It is identified as a Category E Settlement, important to the immediate local area in terms of services and facilities it provides. These include a nursery, primary school, sports facilities and a number of public houses.

12.7.37 Zelah is located within the centre of the proposed scheme and benefits from an existing bypass. As a Category F Settlement, Zelah has a limited number of services and facilities, including a recreation ground, farm shop, a doctor's surgery and public house.

12.7.38 Mitchell is a village located north east of Carland Cross Roundabout and south of the existing A30 bypass. Mitchell is also a Category F Settlement with a small number of businesses and services including a pub, playground, farm shop and hotel.

12.7.39 Given their local scale and settlement category ranking E to F, it is considered their sensitivity is low.

12.7.40 As shown in the Location Plan (Volume 6 Document Ref 6.3 ES Figure 1.1), further afield are the larger settlements of St Agnes (6km to the north), Truro (9km to the East) and Redruth (9km to the South West).

12.7.41 When considering key population trends, it is important to consider the region as well as the local area given the important connectivity function of the A30.

¹⁶ <https://www.cornwall.gov.uk/media/3640460/Settlement-Strategy-Update-Final.pdf>

12.7.42 Cornwall Council has provided a summary of its population trends and data, based on 2011 Census results¹⁷. In summary:

- At the time of the 2011 Census, Cornwall had a population of 532,273. The usual resident population of Cornwall has increased by over 33,000 when compared with the 2001 Census. The increase in population of 6.7% between 2001 and 2011 is lower than the South West and for England and Wales.
- There are substantial differences in the change by age group, highlighting significant increases in the 15-29, 40-49 and 60+ age groups. In line with national trends, Cornwall's population is getting older as average life expectancy continues to rise. Expansion in higher education and better employment prospects have led to reductions of younger people leaving Cornwall.
- The majority of residents (92.7%) are English and (98.2%) from White ethnic backgrounds. 98% of people aged 16 or over in households have English as their main language.
- 60% identify as Christians, in line with the regional and national average.
- The proportion of residents who experience a limiting long-term health problem or disability is higher than the regional and national average, at 21.4%.
- Census confirms a shift towards falling levels of owner occupation and increasing levels of private rented accommodation, both of which are significant indicators of local housing markets under stress. The average household size in Cornwall is 2.3 people per household, this is in line with the England and Wales and South West average.
- There is a lower proportion of both children and older people in Cornwall than seen regionally and nationally, indicating that the proportion of residents who are of working age is above average.
- 17.3% of people in Cornwall are without access to a car, which is a lower percentage than the South West (18.9%) and England and Wales (25.6%).
- Changes in how people travel to work show an increase (6%) in driving a car or van (64%).

12.7.43 When considering the socio-economic profile of the local area, the following wards have been selected to represent the study area as those through which the A30 Chiverton to Carland Cross interacts:

- St Agnes;
- Chacewater and Kenwyn;
- Perranporth;
- Ladock, St Clement and St Erme; and
- Newlyn and Goonhavern.

¹⁷ https://www.cornwall.gov.uk/media/21657889/census_at_a_glance_docxrelease21_allpapersv2.pdf

- 12.7.44 At the time of the 2011 Census, the study area comprised 21,814 people, around 4% of the population of Cornwall.
- 12.7.45 A greater number of people travel to work by car or van in the study area (69%) than the Cornwall average (64%).
- 12.7.46 Both people in the study area and wider Cornwall travel an average distance of 20km to work, likely reflecting the reliance on the car or van for method of travel.

Employment

- 12.7.47 Cornwall Council has also provided a summary of its economic trends and data, based on 2011 Census results.
- 12.7.48 The percentage of those in Cornwall classed as economically active in the 2011 Census is 67%. That compares with 70% in the South West. In the Study Area, there is a slightly increased number of 71%.
- 12.7.49 In 2011, 25% of the population in Cornwall aged 16-74 were qualified to NVQ4 or above. This includes degree (for example BA, BSc) or Higher Degree (for example MA, PhD, PGCE) or equivalent. That number is lower than the South West and England and Wales averages (27%).
- 12.7.50 The most common occupation is 'Skilled Trades and Occupations'¹⁸. Cornwall has the 10th highest percentage of males employed in skilled trades and occupations of the 348 local authorities in England and Wales. Cornwall has the 9th highest percentage of females working part time.
- 12.7.51 In the study area, in terms of the industries those work in, there is a dependence on the following sectors:
- Human health and social work activities – 18%
 - Wholesale and retail trade; repair of motor vehicles and motor cycles – 15%
 - Construction – 10%
 - Education – 10%
- 12.7.52 Given the limited reliance local people have on the construction industry for employment, the sensitivity is considered to be low.

Community safety

- 12.7.53 Relevant to this proposed transport scheme, is the safety of people taking into account accidents involving vehicles, walkers, cyclists and horse-riders.
- 12.7.54 Between 1 January 2012 and 31 December 2016 there were 111 accidents between Chiverton and Carland Cross, of these there was one fatality, 17 serious collisions and 93 slight collisions.
- 12.7.55 Police records attribute two of those accidents involving cyclists and one involving a pedestrian only.

¹⁸ Skilled trades includes skilled agricultural, electronic, construction, textile and printing trades.

- 12.7.56 The national average accident rate for a type of road similar to the existing A30 (defined as an S2 A road, using combined link/junction accident rates applying the appropriate TAG data book, December 2017) is 0.244 Personal Injury Accidents (PIAs) per million vehicle kilometres.
- 12.7.57 When assessing the accidents rates on the existing A30, the road has been divided into three sections, which include accidents on the Chiverton and Carland Cross roundabouts. The average annual combined link/junction accident rates from 2012-2016 are as follows:
- Chiverton to Chybucca = 0.486 PIAs/mvkm
 - Chybucca to Boxheater = 0.136 PIAs/mvkm; and
 - Boxheater to Carland Cross = 0.091 PIAs/mvkm.
- 12.7.58 This shows that whilst the existing section of A30 between Chybucca and Carland Cross experiences below UK average accident rates, the section between Chiverton and Chybucca is nearly double the national average.
- 12.7.59 Overall the sensitivity is considered to be low to moderate to take into account the varying accident rates along the A30.

Health

- 12.7.60 Over three quarters of the population in Cornwall identified their health as 'good' in the 2011 Census. There has been an increase of 12.6% in the population who identified their health as 'good' between 2001 and 2011.
- 12.7.61 There were 6.3% of the population in Cornwall who identified their health as 'bad' in 2011. In 2001 9.9% identified their health as 'bad' meaning a fall of 3.6%.
- 12.7.62 The Public Health England Health Profile for Cornwall in 2017¹⁹ concludes that the health profile of people in Cornwall is varied compared with the average for England. Deprivation is lower than average. However, about 19% (16,800) children live in poverty.
- 12.7.63 Life expectancy is 6.6 years lower for men and 5.1 years lower for women in the most deprived areas of Cornwall than in the least deprived areas.
- 12.7.64 The rate of alcohol-related hospital stays, and the rate of alcohol-specific hospital stays among those under 18, is worse than the average for England. The rate of smoking related deaths better average, but there is a higher level of smoking in pregnant women at the time of delivery.
- 12.7.65 Estimated levels of adult excess weight are worse than average, however the proportion of children classified as obese (18%) is lower than average. The rate of self-harm hospital stays is worse than the average for England.

¹⁹ <http://fingertipsreports.phe.org.uk/health-profiles/2017/e06000052.pdf>

- 12.7.66 There is an Air Quality Management Area within Truro, known as the Truro AQMA. Noise, air quality and neighbourhood amenity are key environmental determinants of health, with poor air quality linked to incidence of chronic lung disease, heart conditions and asthma among children, and noise pollution linked to sleep disturbance, cardiovascular and psycho-physiological effects²⁰. Further matters specifically associated with air quality assessment are considered in the **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5) in this ES.
- 12.7.67 For further information, please refer to the **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1).

Land and Property

- 12.7.68 This section presents the baseline in relation to the main commercial, agricultural, tourism and recreational land and properties located within the study area.
- 12.7.69 Volume 6 Document Ref 6.3 ES Figure 12.2 shows the commercial properties and businesses located along the A30 Chiverton to Carland Cross.
- 12.7.70 Volume 6 Document Ref 6.3 ES Figure 12.3 shows the land required for the scheme, both permanently and temporarily.
- 12.7.71 Volume 6 Document Ref 6.3 ES Figure 12.5 shows the tourism and recreation facilities located along the A30 Chiverton to Carland Cross.
- 12.7.72 Volume 6 Document Ref 6.3 ES Figure 12.6 shows the agricultural land classifications for farm holdings required for the scheme.

Commercial Property/Businesses

- 12.7.73 There are 26 commercial properties/businesses located along the A30 Chiverton to Carland Cross, in addition to 4 solar farms and 4 wind farms, as described in Table 12-9 in order of proximity from the existing A30. These exclude tourism and recreation property/businesses, which are considered separately in the following sections of the baseline.
- 12.7.74 Commercial properties/businesses that are local in nature are considered to have a low sensitivity, whereas those with a regional scale or limited potential for substitution are considered to be of a medium sensitivity.

²⁰ NHS London Healthy Urban Development Unit (2017), Rapid Health Impact Assessment Tool

Table 12-9 Commercial Property/Businesses

Receptor	Approximate Proximity	Main Activities	Sensitivity
Trevisson Park Offices	0.05km north of existing A30	Multi-use office space	Low
Town and Country Motors	0.05km north of existing A30	Car sales	Medium
Shell Garage	0.1km east of Carland Cross roundabout	Fuel station and services	Medium
Parkland Toyota	0.1km east of Carland Cross roundabout	Car sales	Medium
Total Garages	0.1km west of Chiverton roundabout	Services	Medium
Starbucks	0.1km west of Chiverton roundabout	Coffee and refreshments	Medium
Solar farm south of Town and Country Motors	0.1km south of existing A30	Solar farm	Low
Wind farm at junctions joining A30 with B3284	0.1km south of existing A30	Wind farm	Low
Solar farm west of junctions joining A30 with B3284	0.1km south of existing A30	Solar farm	Low
Solar farm east of Trevisson Park Offices	0.1km south of existing A30	Solar farm	Low
Claude Holman Van Sales	0.1km west of Chiverton roundabout	Van sales	Low
Scottish Power Renewables and wind farm	0.4km north of Carland Cross roundabout	Wind farm	Low
Wind farm east of Trevisson Park Offices	0.4km south of existing A30	Wind farm	Low
Nijhuis Industries	0.4km south of existing A30	Water services	Medium
Allstore Storage	0.5km north of existing A30	Storage	Low
Acland Plant Hire	0.5km west of Chiverton roundabout	Plant and machinery hire	Low
Truro Sawmills	0.6km north of existing A30	Sawmill	Medium
Homequest Property Management	0.6km south east of existing A30	Lettings	Low
West Country Cars	0.7km west of Chiverton roundabout	Car sales	Low
Blackwater Studios	0.7km west of Chiverton roundabout	T-shirt printing	Low
Cornish Rose Company	1.1km east of Carland Cross roundabout	Rose growing and sales	Medium
Solar farm south of junctions joining A30 with B3284	1.1km south of existing A30	Solar farm	Low

Receptor	Approximate Proximity	Main Activities	Sensitivity
RBS Groundworks & Plant Hire	1.3km south of Carland Cross roundabout	Groundworks contractor	Low
Kernoda Ltd	1.4km south of Chiverton roundabout	Outdoor clothing	Low
Penstraze Sawmill	1.5km south of Chiverton roundabout	Sawmill	Medium
The Flower Shed, Trebilcocks	1.5km south of Chiverton roundabout	Florist	Low
Fourwinds Garage Mitchell Ltd	1.7km east of Carland Cross roundabout	Car repairs	Low
Mitchell Fruit Garden	1.8km east of Carland Cross roundabout	Fruit growing and sales	Medium
Cube Recording Studio	1km north west of existing A30	Music production and recording	Low
Greyhound Lugger Sailing	1km south east of Chiverton roundabout	Sailing school	Low
Cornwall Environmental Consultants Ltd	1km south east of existing A30	Environmental services	Low
Mike Coad Car & Commercial	1km south of Carland Cross roundabout	Car sales	Low
Truro Farm Machinery	2km east of Carland Cross roundabout	Agricultural machinery	Low

12.7.75 There are a cluster of commercial properties/businesses to the west of Chiverton and to the east of Carland Cross, benefiting from access to/from those junctions. Others are located off side roads along the section of A30, mostly within or near to existing settlements including Marazanvose, Zelah and Carland Cross.

Agricultural land

12.7.76 Within the study area is a mixture of large arable fields, and smaller fields in use as pasture. Agricultural land quality in the survey area is most affected by soil wetness and workability as influenced by the very wet climate.

12.7.77 The Agricultural Land Classification (ALC) system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. This offers a useful way of considering the sensitivity of receptors, sharing a five-point scale (with Grade 1 being of a very high sensitivity and Grade 5 negligible sensitivity).

12.7.78 The principal physical factors influencing agricultural production are climate, site and soil. These factors together with interactions between them form the basis for classifying land into one of five grades; Grade 1 land being of excellent quality and Grade 5 land of very poor quality. Grade 3, which constitutes about half of the agricultural land in England and Wales, is now divided into two subgrades designated 3a and 3b.

12.7.79 Data provided by Reading Agricultural (**Agricultural Land and Soil Resources Report** (Volume 6, Document 6.4, ES Appendix 12.4), June 2018) provides details of the land required and the associated ALC Grade. This is summarised in Table 12-10.

Table 12-10 ALC Data Scheme Wide

Grade	Description	Area (ha)	% of agricultural land
1	Excellent quality	0	0%
2	Very good quality	69.9	47%
3a	Good quality	44.3	30%
3b	Moderate quality	31.4	21%
4	Poor quality	0	0%
5	Very poor quality	1.9	1%
Total ALC agricultural land		147.5	100%
Other land (non-agricultural)		64.3	-
TOTAL		211.8	-

- 12.7.80 It should be noted that the other land (non-agricultural land) figure includes all of that type of land within the Order limits, whereas this report considers land taken within farm holdings only. As such, the non-agricultural land figure hereafter is lower (49.2ha) than the scheme wide calculations (64.3) undertaken by Reading Agricultural.
- 12.7.81 In total, the proposed scheme passes through 56 land holdings and brings potential effects (temporary and/or permanent) to 196 different plots. Plot data, land holdings and ALC data across the proposed scheme is shown in Volume 6 Document Ref 6.3 ES Figure 12.6.
- 12.7.82 An **Agricultural Impact Assessment (AIA)** has been completed in support of this chapter (Volume 6 Document Ref 6.4 ES Appendix 12.5) which provides further information about agricultural land and soils.

Tourism and recreation

- 12.7.83 Cornwall has been consistently voted one of Britain's top tourist destinations and the tourism and recreational sector is therefore of key importance to the local and regional economy.
- 12.7.84 In determining the number of jobs supported by the visitor economy, there are two broad approaches. The first is to estimate the number of jobs supported by visitor spend or turnover, and the second is to consider which Standard Industrial Classification of Economic Activities (SIC) codes are applicable to tourism and use Office for National Statistics (ONS) data to determine actual direct jobs. Neither method is an exact estimate, as using spend or turnover is not counting direct jobs, whereas using ONS data does not count indirect jobs that may be supported by spend in sectors outside of the SIC codes selected, nor does it allow for the calculation of indirect jobs being supported.
- 12.7.85 Using the ONS data, a selection of SIC codes have been chosen as providing the closest fit in terms of the visitor economy, as identified in **Standard industrial classification of economic (SIC codes)** (Volume 6 Document Ref 6.4 ES Appendix 12.3).

12.7.86 This approach suggests that there were 36,000 direct jobs in the Cornwall visitor economy related SIC codes in 2016. Within the wards through which the scheme passes, approximately 2,000 direct jobs were supported within the sector. This suggests the wards through which the scheme passes support approximately 6% of direct jobs within Cornwall's visitor economy.

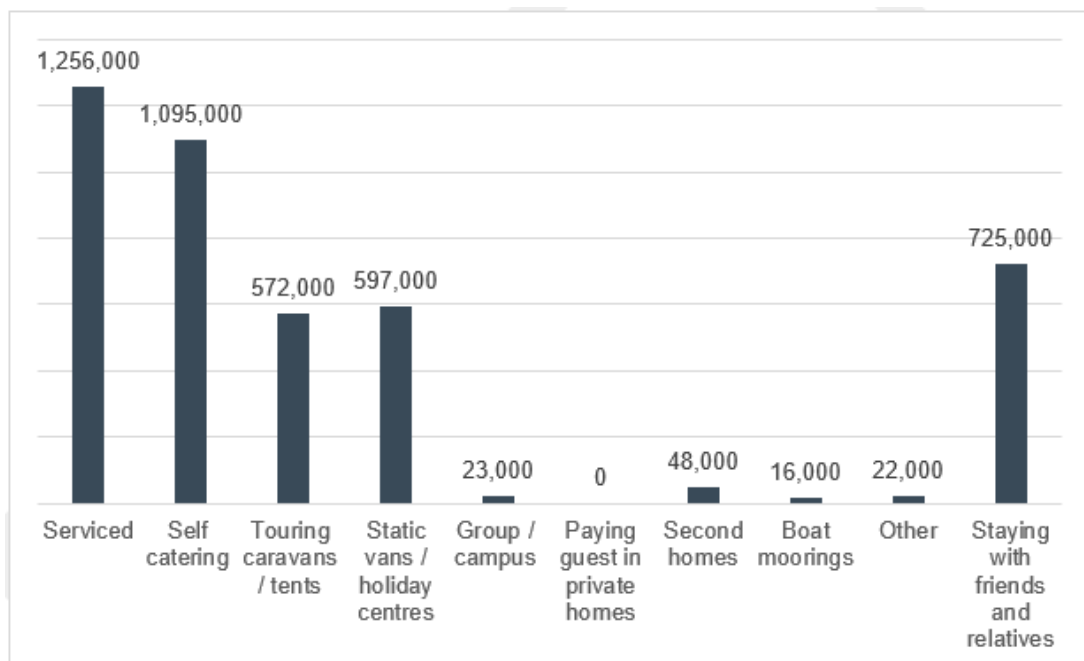
Table 12-11 Jobs in the Visitor Economy

SIC Code/Broad Sector	Cornwall	Relevant Ward Areas
Accommodation	13,100	825
Food & Drink	19,400	1,065
Transport & Travel	550	10
Culture, Attractions, Entertainment, Other	3,325	235
TOTAL	36,375	2,135

12.7.87 Recognising that the SIC Codes would not capture indirect employment and employment in sectors not directly related to tourism (e.g. retail), data from Visit Cornwall for 2016 estimates that the visitor economy attracted approximately 4.7m staying visitors and 14.35m day visitors (a total of 19.2m staying and day trips). These visits were estimated to generate £1.9bn of visitor related spend. This is estimated to support in the region of 54,156 jobs (40,386 FTEs) or 20% of all employment in Cornwall. This employment estimate is made up of 36,356 direct jobs, 10,127 indirect jobs and a further 7,673 induced jobs²¹.

12.7.88 Those staying in Cornwall utilise a variety of accommodation with Table 12-12 and Table 12-13 providing a breakdown of the accommodation used by both domestic and overseas visitors.

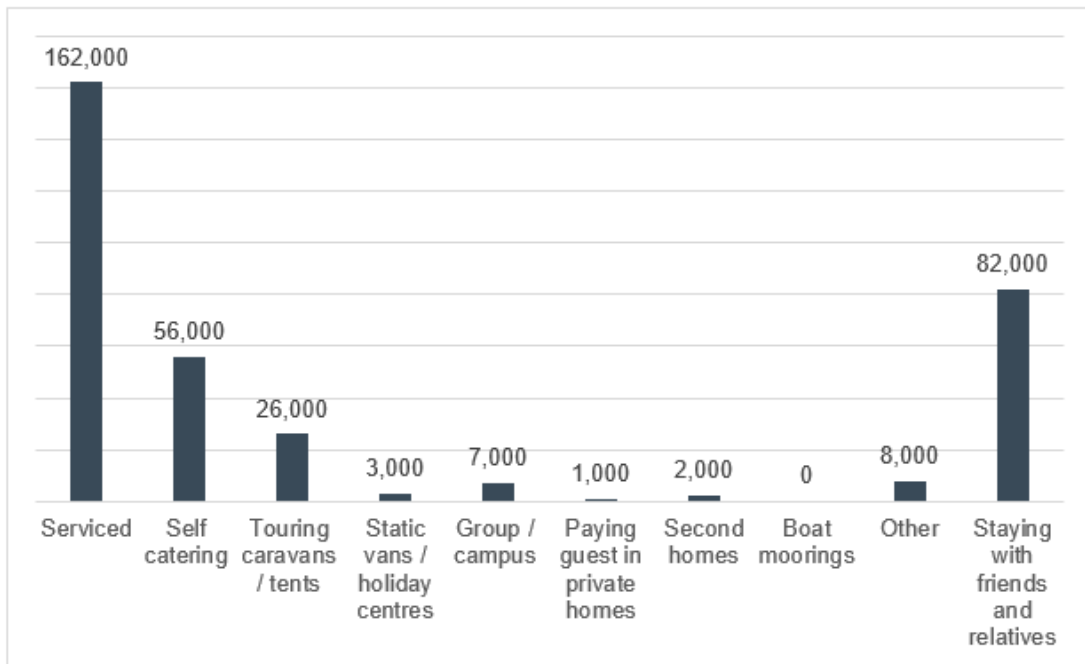
Table 12-12 Staying visits by Accommodation Type – Domestic



²¹ The Economic Impact of Cornwall's Visitor Economy 2016, Visit Cornwall (January 2018)

12.7.89 The data shows a total of 4.35m staying domestic trips, with approximately 20.6m nights stayed and an estimated spend of £1.2bn.

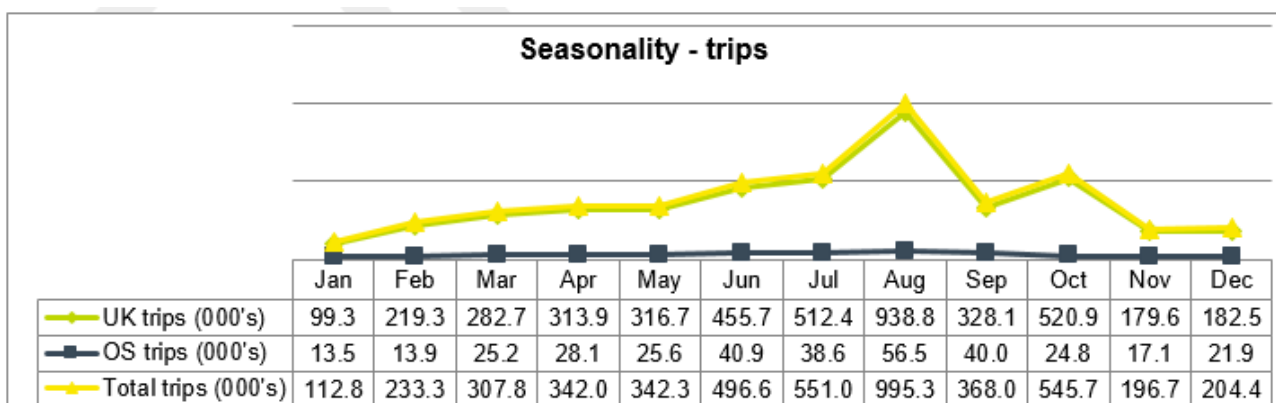
Table 12-13 Staying visits by Accommodation Type – Overseas



12.7.90 In terms of overseas tourism, the data collected shows a total of 346,000 staying trips by overseas visitors, with approximately 2.4m night stayed and an estimated spend of £138m.

12.7.91 As with most locations in the UK, tourism is highly seasonal and data collected shows that the months of June, July and August are those when visitors are most likely to visit. This brings with it associated pressure on key infrastructure (e.g. roads) and tourism facilities/attractions.

Table 12-14 Seasonality – Trips



Source: The Economic Impact of Cornwall's Visitor Economy (2016) – Visit Cornwall (Jan 2018)

12.7.92 At the Cornwall level, it is therefore clear that there is a largely seasonal reliance on self-catering and serviced accommodation, primarily with the private car being used for travel to tourism destinations and attractions, mostly to coastal towns.

12.7.93 Tourism bedspace data has been gathered for the main settlement areas in the vicinity of the proposed scheme, including:

- Truro (postcode areas TR1, TR2 and TR3);
- Redruth (3km radius around the town); and
- Camborne (3km radius around the town).

12.7.94 The data shows that the majority of bedspaces available are within the serviced accommodation sector (hotels, guesthouses, inns and bed & breakfast accommodation). The remainder of available bedspaces are contained within farms, self-catering units, touring caravan and tent pitches and static caravans as summarised in Table 12-15.

Table 12-15 Accommodation Supply 2016

Accommodation Type	Truro	Redruth & Camborne	Total
Hotels (bedspaces)	303	171	474
Guesthouses (bedspaces)	57	23	80
Inns (bedspaces)	0	27	27
Bed & Breakfast (bedspaces)	26	14	40
Farms (bedspaces)	0	6	6
Self-Catering (Units)	7	25	32
Touring caravans/tents (pitches)	0	57	57
Static vans (pitches)	0	27	27

12.7.95 The above table provides the latest bedspace data for those settlements/locations in closest proximity to the scheme and must be considered in the context of the wider region. Data for Cornwall²² shows that the provision locally is only a small proportion of the total bedspace provision across the serviced and non-serviced accommodation stock. For example, within Truro, Camborne and Redruth the 2016 data shows approximately 627 serviced bedspaces, 32 self-catering units and 84 caravan, tent or static caravan pitches. When compared to 2008 data for Cornwall these figures represent approximately 2% of the total serviced accommodation and under 1% of the total self-catering and caravan/tent pitches.

12.7.96 The latest occupancy data for Cornwall dates from 2009²³ but has been utilised as the latest available dataset. As with wider tourism data, the occupancy rates show large seasonal variations. Peak occupancy in serviced accommodation reaches 82% in August with lowest occupancy recorded in January at 31%. Average occupancy rates in serviced accommodation over the 12 months was 57%.

12.7.97 In non-serviced accommodation peak occupancy was recorded in August at 88% with lowest occupancy in November at 13%. Average occupancy rates in the non-serviced stock over the 12 months was 47%.

²² 2008 data was provided by Visit Cornwall

²³ Cornwall Occupancy Rates 1993 to 2009 – see:

https://www.visitcornwall.com/sites/default/files/generic_files/Cornwall%20Occupancy%20Rates%2093%20to%2009_0.pdf

12.7.98 Reflecting the prominence of the tourism sector within Cornwall, the study area for the proposed scheme contains a number of tourism and recreational facilities which rely on the A30 for access. Given the above regional information, it is considered that the local area in which the scheme passes is a non-coastal town but that it is an important gateway route given the importance of the A30 for tourism travel in the wider area.

12.7.99 As such, for direct impacts, the appropriate study area is considered to include facilities within the order limits (scheme footprint) and for indirect and amenity impacts, facilities within 2km of the scheme centre line.

12.7.100 The location of the receptors within the study area are shown on Volume 6 Document 6.3 ES Figure 12.5 and summarised in Table 12-16, in order of proximity to the existing A30.

Table 12-16 Tourism and Recreation Receptors

Receptor	Approximate Proximity	Main Activities
Accommodation		
Marazan Farm Campsite	70m south east of existing A30	Family run Camping and Caravanning site
Chiverton Arms	250m west of Chiverton Cross roundabout	B&B hotel and pub
Trevarth Holiday Park	435m west of Chiverton Cross roundabout	Family run holiday park with 20 static caravans and touring pitches for caravans/camping
Chiverton Caravan and Touring Park	530m west of Chiverton Cross roundabout	Holiday park with 50 holiday homes and approximately 10 touring pitches for caravans
Goonwinnow Farm	1km north of Carland Cross roundabout	Holiday cottages
Little Callestock Farm and Callestock Courtyard Cottages	1km north west of existing A30	Holiday cottages
Fair View Farm	1.2km south east of existing A30	Caravan Park
Plume of Feathers	1.4km north east of Carland Cross roundabout	B&B hotel and pub
Summer Valley Touring Park	1.9km south east of existing A30	Family run holiday park with a static caravan, glamping pod and 43 pitches for caravans/camping
Eateries/Venues		
The Hawkins Arms	160m north west of existing A30	Traditional pub with restaurant
NFH	215m south east of existing A30	Farm, rural events venue for event hire and private dining
Callestick Farm Ice Cream with Tearoom	1.5km north west of existing A30	Farm and ice cream family business with visitor tearoom
Visitor Attractions		
Chyverton Park Equestrian Centre	475m north west of existing A30	Equestrian training and competition complex

Receptor	Approximate Proximity	Main Activities
Chiverton Riding Centre	500m north of Chiverton Cross roundabout	Equestrian indoor arena and an outdoor sand school
Colrairie Equestrian Centre	710m north west of existing A30	British Show Jumping and British Dressage in Cornwall
Llama Land	1.6km south east of existing A30	Now largely a solar farm, the visitor attraction still offers Llama walks in Cornwall
Healey's Cornish Cyder Farm	1.8km north of the existing A30	Cornish Cyder producer and visitor attraction

12.7.101 The approach to clarifying the sensitivity of tourism and recreation receptors has been agreed with Cornwall Council and Visit Cornwall, taking into account the nature of the asset, degree of permanence and ability to relocate, as well as location. Visitor numbers where available have also helped inform the exercise. For the purposes of this assessment, the World Heritage Site given its international nature is considered to be of a high sensitivity, whilst the more regional assets of Healy's Cyder Farm and NFH are of a medium sensitivity, with all others are considered to be of a low sensitivity.

12.7.102 The tourism and recreation receptors identified above broadly reflects the tourism related employment, with a focus on employment within the accommodation and food and drink sectors within the wards through which the scheme passes. However, the data also indicates that the local facilities as identified above form only a small part of the wider Cornish visitor economy (contributing around 6% of jobs). The data also suggests that the A30 forms a vital piece of transport infrastructure supporting access to the visitor economy in Cornwall, with over 80% of visitors relying on the private car for travel.

World Heritage Site

12.7.103 A list of those World Heritage Site (WHS) Areas which could experience impacts (suggested by Cornwall Council to be principally beneficial as a result of the scheme) has been put forward by Cornwall Council, as follows:

- Within the Order Limits - Gwennap (WHS Area 6);
- Outside and within 5km the Order Limits – St Agnes (WHS Area 7); and
- Further afield (West) – Camborne/Redruth and Hayle (Areas 5 and 2).

12.7.104 These are shown in **World heritage site areas** (Volume 6 Document Ref 6.4 ES Appendix 12.6).

Allocated/Future Development Land

12.7.105 In the Cornwall Local Plan, the Community Neighbourhood Area (CNA) of St Agnes and Perranporth, under which part of the scheme falls, aims to develop 1,100 dwellings before 2030, of which 490 had already been completed at the time of writing the Strategic Policies Document in 2014. The remaining section falls under the CNA of Truro and Roseland, which aims to develop 3,900 dwellings before 2030.

12.7.106 There are no development allocations within the Cornwall Local Plan which would be directly affected by the scheme.

- 12.7.107 There are no known current pending planning applications within the Order limits of the scheme.
- 12.7.108 Cornwall Council has provided a list of proposed developments with planning permission. Those that are relevant to the scheme by virtue of their proximity within 2km of the A30 include:
- PA15/06100 (within 1km) – Roadside hotel and restaurant (Chiverton)
 - PA16/08707 (within 1km) – Extension to office space (Trevisson Park)
 - PA15/02972 (within 1km) – 1.5 Mw wind turbine (East of B3285/A30)
 - PA14/07885 (within 2km) – 24 residential units (Blackwater)
 - PA14/08092 (within 2km) – Mixed use (Penstraze)
 - PA15/11489 (within 2km) – 494 dwellings (Threemilestone)
- 12.7.109 The mixed-use development at Penstraze and large residential development at Threemileston are considered to have a medium sensitivity given their more regional scale and limited potential for substitution. The other identified developments are considered to be of low sensitivity taking into account their more local nature, rarity and scale.
- 12.7.110 All proposed developments including those listed above have been taken into account as part of a **Consideration of cumulative effects** (see Volume 6 Document Ref 6.2 ES Chapter 15), and are shown in Volume 6 Document Ref 6.3 ES Figures 15.1 and 15.2.

Other land uses

- 12.7.111 There are no allotments, playgrounds, sports pitches, or formal open spaces located along the length of the scheme.
- 12.7.112 There is an area of land designated under the Countryside and Rights of Way Act (2000) as Open Access land, which comprises much of Newlyn Downs and is located 250m north west of Carland Cross junction.
- 12.7.113 There is also a smaller section of Open Access land located around a disused quarry immediately adjacent and to the south of the A30 approximately 250m west of Carland Cross junction. A small part of this southern area is within the land-take of the scheme. The area is not currently publicly accessible and not used for recreational purposes. As such it is considered to have a low sensitivity.

12.8 Consultation

- 12.8.1 The scope of the EIA has been informed through engagement with the Planning Inspectorate through a request to them for a Scoping Opinion. The request was made in August 2017, and was accompanied by a Scoping Report. The Scoping Opinion was received in September 2017. Both the Scoping Report and the Scoping Opinion have been made available by the Planning Inspectorate on their website²⁴.
- 12.8.2 The Scoping Report was issued to 66 bodies by PINS, of which 21 consultees replied by the statutory deadline. **Response to scoping opinion** (Volume 6 Document Ref 6.4 ES Appendix 4.2) sets out the responses to the Scoping Opinion, which have helped inform this Chapter as follows:
- Need to consider human health (now taken into account as part of the Health Impact Assessment²⁵);
 - Need to consider land use and tourism impacts and map relevant facilities (now taken into account as part of the assessment of Land and Property);
 - Need to consider the World Heritage Site (now taken into account as part of the assessment of Land and Property);
 - Need to identify and assess any closures or diversions of routes, as well as the consideration of both the existing and proposed A30 with regard to travel conditions (now taken into account as part of the assessment of All Travellers); and
 - Need to cross reference to other appropriate assessments when relevant, for example Landscape and Visual Impact Assessment (ES Chapter 7) (now taken into account as part of the assessment of amenity throughout).
- 12.8.3 Statutory consultation on the proposed scheme and its Preliminary Environmental Information Report was held between 29 January and 12 March 2018. Around 70 comments were received from participants relating to matters relevant to this Chapter, falling into categories of All Travellers, Communities and Land and Property. Volume 5 Document Ref 5.1/5.2 provides a response to statutory consultation responses and they have been taken into account within this Chapter.
- 12.8.4 More focused engagement has also been undertaken with relevant stakeholders to help inform this assessment on a topic basis. The key matters raised and taken into account as part of this assessment are summarised below.
- 12.8.5 Discussions have been held with Cornwall Council's highways department at key stages during design development, which have helped inform the design, layout and associated decision making. This is detailed in the Statement of Common Ground, with in Volume 7 Document Ref 7.4 **Statement of Commonality**.
- 12.8.6 In relation to WCH, the PRoW network and the DCO application, more focused consultation has been undertaken with Cornwall Council's Open Space and Countryside and Access Teams. A meeting on 11 May 2018 was held in relation to proposals to consider the existing situation, potential impacts and how best to manage the PRoW network and local routes during both construction and operation of the proposed scheme.

²⁴ <https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a30-chiverton-to-carland-cross-scheme/>

²⁵ Volume 6 Document Ref 6.4 ES Appendix 12.1 Health impact assessment

- 12.8.7 Specifically, the meeting and associated discussions have considered the PRoW Management Plan²⁶ and the proposals for WCH have been refined and finalised as a result of that collaborative approach. There were no disagreements with the methodology or proposed management measures. Agreement is documented within the Statement of Common Ground with Cornwall Council (Volume 7 Document 7.4 **Statement of commonality**). For the history of engagement informing the consideration of WCH and PRoW, please refer to the PRoW Management Plan, where more detail is provided.
- 12.8.8 The project's Stakeholder Engagement Lead and Highways England Lands Team has undertaken wide ranging engagement with landowners and tenants to help establish land and property information and details. Ongoing discussions in relation to mitigation, concerns about property and any land negotiation will continue to be led by Highways England, with the District Valuer as appropriate.
- 12.8.9 In terms of land and property, the statutory consultation on the proposed scheme held between 29 January and 12 March 2018 received some comments relating to those issues, in particular tourism. For example, respondents submitted:
- Concerns that a lack of access to the new A30 could result in additional congestion, impeding access required for the Cornish tourism industry;
 - Concerns that the construction of the scheme could exacerbate negative perceptions of tourism in Cornwall and increase background noise, resulting a net loss of tourists visiting Cornwall, and that large-scale congestion associated with construction would result in a net reduction of tourists and tourism industry revenue. A requirement for adequate seasonal phasing of construction was raised to help mitigate any adverse impacts.
 - Support for the economic benefits the proposed A30 will bring to Cornwall such as increased investment due to accessibility, improved economic prosperity and enhancements of the tourism industry; and
 - Investment in cycling infrastructure and the current A30 would act a catalyst for cycle tourism within the County.
- 12.8.10 A focused meeting was held to discuss tourism and economic development matters on 11 May 2018 with representatives of Cornwall Council, Visit Cornwall and Cornwall Sustainable Tourism (COAST). In summary, the key issues discussed included agreement about the approach to assessment, receptors identified and data to be taken into account. A Statement of Common Ground with each of Cornwall Council and Visit Cornwall sets out key points of agreement and support in relation to the scheme.

²⁶ Volume 6 Document Ref 6.4 ES Appendix 16.1 Outline CEMP Annex M

12.9 Assessment Assumptions and Limitations

General matters

- 12.9.1 As far as practicable, agreement has been made with the relevant officers of the local authority, Cornwall Council, in the approach taken to this assessment (see the relevant Statement of Common Ground within Volume 7 Document Ref 7.4 **Statement of commonality**).
- 12.9.2 It should be noted that DMRB guidance does not specify a standard study area for the assessment of effects on some impact areas (e.g. All Travellers). As such, appropriate study areas have been defined based on professional judgement, best practice and in agreement with stakeholders including Cornwall Council.
- 12.9.3 The assessment relies, in part, on data provided by third parties (e.g. Cornwall Council) which are the most up to date, available at the time of the assessment. No significant changes or limitations in these datasets have been identified that would affect the robustness of the assessment for EIA purposes.
- 12.9.4 To avoid double counting of effects, the assessment identifies and assesses only temporary construction effects that arise as a result of activities and elements that are unique to the construction phase, separate from the post construction phase when the road would be operational. For example, the permanent removal of built form or vegetation is assessed as part of the operational phase, but the works, such as disruption caused by construction plant used during demolition and site clearance are assessed as part of the construction phase.
- 12.9.5 The assessment of impacts on the identified facilities/receptors has been based on a desktop and site verification exercise, taking into account the promoted use and function of the identified facilities/receptors in the study area (e.g. tourism and recreation assets). Given the majority of potential impacts are likely to be indirect (with receptors outside of the scheme's Order limits), the assessment often focuses on indirect and amenity effects on the operation and accessibility of existing facilities during both construction and operation of the proposed scheme.
- 12.9.6 Amenity has been assessed using, and relies upon, the assessments of other competent experts. These include the results of the relevant assessments into potential noise and vibration, landscape and visual, and air quality effects²⁷. As such, the assumptions and limitations that those experts rely are shared as part of this assessment.

All travellers

- 12.9.7 The impacts on traffic flows and travel conditions rely on the outputs of the traffic model, which is described in the relevant **Combined Modelling and Appraisal Report** (Volume 7, Document Ref 7.5.)
- 12.9.8 Accident data relies upon the accuracy of police records and is limited to Personal Injury Accidents (PIAs), which is the only data set used to evidence collision rates. The accident data will not take into account other types of incident including shunts and vehicle breakdowns, which do not form part of the police statistics.

²⁷ **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5)

12.9.9 The assessment of bus travellers has assumed that services would continue to use existing routes and facilities along the existing A30. It is not intended that the existing bus facilities would change as a result of the scheme once works are completed.

Communities

12.9.10 Socio-economic baseline data has largely been based on outputs from the 2011 Census, which despite being around 7 years old at the time of this assessment, provides the most reliable dataset.

12.9.11 As set out in **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1), the literature and baseline data used in the Health Impact Assessment has been limited to readily available public and published sources. The information contained within the ES and other project documents has been used to characterise the study area and identify impacts on health determinants. The approach to the assessment of health impacts is generally qualitative, identifying likely positive and negative impacts based on the relationships between determinants and health outcomes identified within the literature reviewed.

Land and Property

12.9.12 A review of commercial property and businesses has been informed by a desktop exercise and site visit to the study area, to help identify receptors. The list may not be exhaustive.

12.9.13 A review of the farm holdings, their plots and areas affected by the scheme either permanently and temporarily, has been undertaken utilising land registry data and informed by landowner questionnaires. Land registry data has only been sourced within the Order limits and as such the full extent of farm holdings is unknown and has not been shared by landowners largely for commercial reasons. As such, the percentage of land take, either temporarily or permanently, is a proportion of that land take compared to the farm holding plots directly affected by the scheme only. To help understand the potential impact of the scheme on a farm holding, landowner discussions and consultation has facilitated the opportunity for concerns to be shared.

12.9.14 The assessment has not taken into account the commercial operation or viability of businesses beyond where there is a direct impact on a tourism facility, in which case it has been assumed that Highways England would seek to discuss and agree mitigation through negotiation where the direct impact is unavoidable, in accordance with their relevant Compensation Code and discussions with the District Valuer.

12.9.15 In terms of assessing the quality of farmland, an independent review of Agricultural Land Classification (ALC) for the Order limits has been undertaken (see **Agricultural land and soil resources report** (Volume 6 Document Ref 6.4 ES Appendix 12.4)). This assessment of the likely effects relies upon the accuracy of those datasets and information as provided by third parties.

12.9.16 Following a desktop review and site visit to the study area, the identified tourism and recreation receptors have been discussed and agreed with Cornwall Council and Visit Wales, focusing on the most relevant facilities for the assessment. The list may not be exhaustive.

12.9.17 Effects on property prices have not been considered as part of the assessment, given they are not planning matters within the scope of considerations for the DCO. Again, where necessary mitigation for adverse land and property impacts cannot be identified or achieved, Highways England may seek to discuss and agree mitigation through negotiation where an impact is unavoidable, in accordance with their relevant Compensation Code and discussions with the District Valuer.

Limits of deviation

12.9.18 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).

12.9.19 For people and communities, it is considered that the worst case has been assessed within the ES (Volume 6 Documents Reference 6.2 Chapter 12) and the proposed LOD will not give rise to any materially new or materially worse adverse environmental effects from those already reported.

12.10 Design, Mitigation and Enhancement Measures

Engineering design

12.10.1 The scheme and its junctions have been designed to appropriate standards (Design Manual for Roads and Bridges), to allow safe access to existing facilities and services. For example, existing crossings and access arrangements interacting with the existing A30 will largely be provided with appropriate diversions or replacement infrastructure as part of the proposed scheme. This includes a number of overbridges and underpasses to address potential severance.

12.10.2 Where overriding landscape or design constraints do not cause restrictions, the views from the road would not be obstructed by new structure(s), and open views of the surrounding countryside would be retained.

12.10.3 Use of best practice construction methods during construction will reduce disruption to users of facilities within the facility of the scheme.

Construction mitigation

12.10.4 The Construction Environmental Management Plan (CEMP) provides a complete list of outline mitigation measures to be taken into account as part of the construction of the scheme **Outline CEMP** (Volume 6, Document Ref 6.4, Appendix 16.1).

12.10.5 When work is required that affects the existing A30 and its side roads, a series of traffic and WCH route management measures will be implemented including:

- Single way working of traffic in each direction maintained at all times;
- Safety measures to reduce fear of accidents;
- Clear signage and layout especially at diversion routes; and
- Speed restriction in work areas for the safety of road users and the construction workforce. These restrictions will only be introduced when the works commence and will remain until a specific section is complete.

- 12.10.6 Any diversion routes would be clearly marked and signed during these periods and adequate notices would be given to road users and local residents via press notices and local newsletter distributions to be agreed with Cornwall Council as appropriate, thereby helping mitigate impacts associated with driver uncertainty.
- 12.10.7 Where the construction works would affect access to existing tourism receptors, temporary alternative access arrangements would be provided in agreement with the receptor.
- 12.10.8 Where access is affected to private properties and businesses, temporary alternative access would be provided as appropriate, to be agreed with the land owner and/or tenant(s) as necessary.
- 12.10.9 Necessary access arrangements during construction will be detailed in a Traffic Management Plan. A draft **Traffic Management Plan** has been provided in Volume 6 Document Ref 6.4, Appendix 2.1.
- 12.10.10 Land required for construction compounds would be returned to its original use and condition as per before the works. The majority of that land will be agricultural use. As such, crop loss will aim to be reduced by giving advanced warning to enable farmers to plan ahead and consideration of field drainage impacts during the design phase. In areas of land which would be temporarily acquired, soils would be managed in accordance with DEFRA (2009) 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' with Highways England and its contractor discussing and agreeing with Cornwall Council how agricultural land will be restored at the end of construction.
- 12.10.11 Severance during construction will be minimised through careful siting of construction compounds and lay down areas and careful planning of construction activities through consultation with the landowners, and mitigated in places by new temporary and permanent accesses.
- 12.10.12 Potential indirect amenity effects relating to noise, dust and visual impacts associated with the movement of construction vehicles and construction works would be mitigated through considerate construction management including the use of screening (temporary or permanent), which will be outlined in further detail in the outline Construction Environmental Management Plan (CEMP) to be submitted in support of the Environmental Statement with the DCO application.
- 12.10.13 Direct effects on existing receptors would be mitigated by compensation through land negotiations with Highways England as appropriate.

Operation mitigation

- 12.10.14 Landscape mitigation measures as detailed in **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7) would consist of the landscape planting and principally designed with the intention of mitigating negative effects and benefiting nature conservation and biodiversity, landscape integration and visual amenity.
- 12.10.15 Landscaping mitigation would also serve to contribute to noise mitigation measures as detailed in **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11), with the intention of mitigating negative effects and benefiting noise levels where there are sensitive receptors, for example tourism facilities. For example, noise barriers would seek to address amenity effects where appropriate.
- 12.10.16 To help mitigate the impact on bus services, early consultation with bus operators, provision of advance travel information for passengers and effective traffic management will be required. Any temporary bus stops (if necessary) would be identified through engagement with operators and would be provided if agreed with Cornwall Council. If necessary, they would be clearly signposted for the general public.
- 12.10.17 The need for additional signage beyond typical highway signage, for example to tourism assets, would be discussed with Highways England, Cornwall Council and Visit Cornwall. For example, the accessibility around Chybucca junction is limited to eastbound movements and in particular there may be a need to sign tourism facilities off the A30 at Carland Cross and/or Chiverton Cross.

Enhancement

- 12.10.18 Replacement WCH routes with diversions or substitutes would match existing conditions or better. New WCH routes as described in more detailed within the PRow Management Plan which is **Annex M Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1). It is assumed, following discussions with Cornwall Council, that new PRow would be adopted and maintained by Cornwall Council and added to their Definitive Maps. New WCH routes aim to better connect existing routes and would complement rather than substitute existing routes.
- 12.10.19 No enhancement measures beyond the mitigation required to offset any adverse effects as a result of the scheme will be proposed for tourism and recreation facilities, because impacts are indirect and/or not significant.
- 12.10.20 Any construction works affecting surfaces would be put right following completion of those works. For example, highway and PRow surfaces would be restored to their previous state or better, and agricultural land that is handed back following temporary land take would be restored to its previous quality or better.

12.11 Assessment of Effects – All Travellers

Vehicle travellers

Views from the road during construction

- 12.11.1 In relation to views from the road, DMRB, Volume 11, Section 3, Part 9 advises that there are four categories which should be used in assessing travellers' ability to see the surrounding landscape, including:
- No view – road in deep cutting or contained by earth bunds, environmental barriers or adjacent structures;
 - Restricted view – frequent cuttings or structures blocking the view;
 - Intermittent view – road generally at ground level but with shallow cuttings or barriers at intervals; and
 - Open view – view extending over many miles, or only restricted by existing landscape features.
- 12.11.2 Sources of construction effects on views from the road include:
- Temporary construction compounds;
 - Stockpiling and storage of materials;
 - Excavation and handling of materials;
 - On and off-site construction traffic; and
 - On-site plant.
- 12.11.3 In addition to the construction of new stretches of dual carriageway, there would be 8 construction compounds between Chiverton and Carland Cross as shown on the General Arrangement and Public Rights of Way and Access Plans:
- South of Chiverton roundabout;
 - East of Chybucca;
 - West of Marazanvose;
 - South West of Zelah;
 - South East of Zelah;
 - North East of Zelah;
 - Between Zelah and Carland Cross;
 - East of Carland Cross roundabout.
- 12.11.4 For the purposes of this assessment and taking into account the methodology outlined in **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7) the sensitivity of vehicle travellers in terms of views from the road is considered to be low.
- 12.11.5 During construction, effects will be short-term and temporary, with a negligible or minor magnitude of change.
- 12.11.6 Where the A30 and A3075 diverge, views from the A30 to the north and south are currently open, with a higher elevation to the north and lower elevation to the south. During construction, views to the north could be slightly adversely affected by the construction works. However, it is considered that the existing long-distance views to the south would help offset this impact.

- 12.11.7 Views from the existing A30 including the stretch approaching Chybucca are largely obstructed by hedgerows and vegetation, which is reduced slightly where the existing A30 widens into two lanes. Where construction of the new stretch of the A30 and its junctions would occur online, there would be some vegetation loss, which would have the benefit of opening up the views from the road to the surrounding countryside. Where views open to construction compounds, it is anticipated that any vegetation removal required would be minor, short-term and would not result in any significant adverse impact.
- 12.11.8 Furthermore, the approach to Marazanvose is unlikely to be impacted by the scheme as the views from the road are currently intermittent. At Marazanvose there is likely to be some vegetation clearance as the works are carried out online, which may result in an opening of views from the road to the surrounding landscape.
- 12.11.9 Along the Zelah bypass, views from the road are currently restricted, and the proposed construction to the south would unlikely be visible except for a number of intermittent points along the road. This is likely to include the point where two unnamed watercourses cross underneath the bypass. It is considered that the views from the road would not be significantly impacted and drivers will largely continue to experience restricted views.
- 12.11.10 On the approach to Carland Cross, views are currently open with occasional interruption by hedgerows and dwellings. The construction of the new road and Carland Cross junction would likely dominate long distance views. This would impact on views from the road by restricting visibility of the landscape.
- 12.11.11 There is no additional mitigation proposed in relation to drivers' views from the road during the construction phase beyond best practice techniques described in the CEMP. However, Highways England and its Contractors will aim to ensure views are not obstructed during construction and where practicable open views of the surrounding countryside would be retained during operation.
- 12.11.12 Overall, given the sensitivity is considered to be low and magnitude of change is considered to be negligible or minor, effects will be insignificant.

Views from the road during operation

- 12.11.13 It has been assumed that following construction, the removal of any vegetation during construction would be replanted. Landscape mitigation measures as outlined in **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7) would consist of the landscape planting and principally designed with the intention of mitigating negative effects and benefiting nature conservation and biodiversity, landscape integration and visual amenity.
- 12.11.14 With mitigation in place, the sensitivity of travellers in relation to views from the road would remain low, whilst the impact of the scheme on views from the road would reduce the magnitude to neutral overall during operation, being insignificant. This is summarised in Table 12-7.

Table 12-17 Impact on Views from the Road

Road section	Existing view	With the scheme	Significance
South of Chiverton Cross/Chiverton approach	Open/Restricted	Open/Open	Slight beneficial
Chiverton to Chybucca	Restricted	Restricted	No change
Approach to Chybucca	Restricted	Open	Slight beneficial
Chybucca to Marazanvose	Intermittent	Intermittent/open	Slight beneficial
Zelah	Restricted	Restricted	No change
Pennycomequick	Open	Open	No change
B3285 and A30	Restricted	Restricted	No change
Approach to Carland Cross	Open	Restricted	Slight adverse

12.11.15 The scheme will result in new viewpoints being created and during operation, with reference to **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), the view from the proposed scheme will provide a positive experience for drivers. That is likely to be comparable with the existing situation. As such, a neutral effect is likely.

Driver stress during construction

12.11.16 DMRB guidance states that on account of available evidence, the use of finely graded assessments of driver stress is not appropriate. In line with this advice, a three-point descriptive scale has been applied as follows:

- Low (minor);
- Moderate; and
- High (Major).

12.11.17 The majority of the construction of the scheme would take place offline, which would minimise impacts on road users of the existing A30 and side roads. Some sections would involve online works with interfaces between the scheme and existing roads, for example at the junctions and at Chybucca and Tolgroggan.

12.11.18 During construction, traffic management measures including limited temporary diversions and speed limits where works interface with existing roads could result in minor delays and frustration and increased fear of accidents. There would also be additional construction traffic, largely HGVs and construction machinery, which are typically slower moving vehicles. Best practice mitigation measures such as safety measures, short diversions and off-peak working where practicable will be detailed in a **Traffic Management Plan** (Volume 6 Document Ref 6.4, ES Appendix 2.1) to be submitted by Highways England and its contractor and agreed with Cornwall Council. Effects during construction would likely result in a short term and low adverse impact on driver stress.

Driver stress during operation

12.11.19 The proposed junctions have been designed in accordance with Highways England's and the Department for Transport's (DfT) standards for road signing and it is therefore assumed that route uncertainty would not be a contributing factor to driver stress once the scheme is operational. This assessment therefore focusses on potential changes to driver frustration and fear of potential accidents caused by changes to traffic flows and vehicle speeds, and route uncertainty has not been considered further within this assessment.

- 12.11.20 The average forecast peak period traffic flows on local roads near the A30 as a result of the scheme show a reduction (improvement in traffic conditions). The upper bound percentage forecast reduction in traffic in any direction along any local roads in the vicinity of the A30 is 40%²⁸. (i.e. traffic on local roads that interact with the existing A30 would reduce by up to 40%, making the local roads less trafficked).
- 12.11.21 By 2038 with forecast traffic growth, there would be up to an average 9-minute journey time saving between Chiverton and Carland Cross as a result of the scheme, with potential further savings at times of incidents and delays²⁹.
- 12.11.22 Traffic modelling results also show that with the scheme in place, over the appropriate 60-year appraisal period, the forecast reduction in accidents is expected to be 772. That would be reflective of a reduced fear of accidents.
- 12.11.23 The scheme is also anticipated to reduce driver fear as a result of the improved dual carriageway and modern design standards, with additional lay-bys and enhanced visibility of junctions. Improved journey quality is also likely to be a benefit of the new and improved road surfacing, which would help reduce spray and noise levels. Reduced delays and improved travel conditions and journey times as a result of the scheme are also likely to contribute positively to helping reduce driver stress compared to the existing conditions.
- 12.11.24 It is acknowledged that the proposed junction arrangement at Chybucca only facilitates exit from the proposed A30 travelling eastbound. This has the potential to cause some driver frustration for users of the proposed A30 travelling westbound should they wish to access local communities, facilities and services around that junction. Whilst it is also acknowledged that those users could alternatively use the existing A30 for those trips, it is appreciated that there could be some stress and frustration caused to those users unfamiliar with the local area. To help mitigate that potential effect, appropriate signage is proposed at Chiverton and Carland Cross junctions, facilitating early driver decision making about which route they may choose to take.
- 12.11.25 It is assessed that on balance the scheme would provide a long-term, moderate beneficial effect on drivers' stress levels

Bus travellers during construction

- 12.11.26 During the construction phase, the scheme would affect bus travellers' access to two bus stops, at Marazanvose (one in each direction) adjacent to the A30 and in close proximity to the Marazan Farm Campsite/Marazanvose Farm. The sensitivity of bus travellers is considered to be low. They would likely be temporarily affected by construction works.
- 12.11.27 However, to help mitigate the impact on bus services, early consultation with bus operators, provision of advance travel information for passengers and effective traffic management is suggested.

²⁸ Forecast traffic flows on some local roads could see reductions by up to 38% by 2023, and 40% by 2038.

The maximum reduction applies to the A390 between Chiverton and Threemilestone westbound in the PM peak: with 488 less vehicles in 2023 and 520 less vehicles in 2038. NB: Whilst the majority of local roads would benefit from the scheme, traffic flows on some local roads will increase (e.g. on the B3284 through Shortlanesend where traffic could increase by 51% in the peaks in 2023).

²⁹ Forecast journey times show that there could be up to 5m46s savings in average journey time in 2023 (WB, AM peak), rising to up to 8m50s saving in average journey time savings by 2038 (EB, PM peak) between Chiverton and Carland Cross

12.11.28 Any replacement temporary bus stops that may need to be provided would be clearly signposted for the general public. As such, the magnitude of change is likely to be negligible to low.

12.11.29 With mitigation in place, the impact on bus travellers during the construction phase would be short-term and slight adverse.

Bus travellers during construction

12.11.30 During operation, the existing A30 would benefit from a significant reduction in traffic flows along the bus routes, which would benefit bus services and their users. The sensitivity of bus travellers would remain to be low and the magnitude of change would be minor. That would result in a likely long term slight beneficial effect.

Walkers, Cyclists and Horse-riders (WCH)

12.11.31 The assessment of effects on WCH considers direct effects on the routes where they are crossed by the proposed development and/or affected during construction (e.g. used in full or in part as construction accesses or crossed by construction routes). The assessment also considers indirect amenity effects on users of the routes, particularly where they run parallel to the proposed development. When considering indirect amenity effects, the assessment has been completed in the context of the current baseline.

12.11.32 With the scheme in place, the existing A30 would be much more attractive to walking, cycling and horse-riding. The upper bound percentage forecast reduction in traffic in any direction along any section of the A30 Chiverton to Carland Cross is 97%³⁰. (i.e. up to 97% of traffic would transfer onto the new route, making the existing A30 significantly less trafficked, with the potential for a substantial improvement in severance along the existing A30).

12.11.33 The role of the existing A30 would therefore change if the scheme goes ahead, with reclassification and a significant reduction in traffic flows. Based on reduced traffic flows and improved travel conditions as a result, those transport benefits would facilitate and allow improved conditions for walkers, cyclists and horse-riders along the existing A30.

12.11.34 The assessment is made in the context of the PRoW Management Plan in **Outline CEMP Annex M** (Volume 6 Document Ref 6.4 ES Appendix 16.1) The Management Plan demonstrates a planned approach to the management of PRoW during the construction of the proposed development to ensure public safety while minimising disruption to users.

12.11.35 A number of impacts are identified during construction, however, it is Highways England's intention to keep the majority of PRoW's open via local management, early re-provision and/or use of short-term, temporary closures in order to balance the risks to the public against the potential disruption that removing such a risk would cause.

³⁰ Maximum forecast reduction occurs westbound along the existing A30 between Chybuca and Marazanvose between 2023 do minimum and 2023 do something model results

- 12.11.36 Through consultation with Cornwall Council a hierarchy of mitigation has been agreed (see **Statement of Common Ground**, Volume 7 Document Ref 7.4), which reflects this approach and seeks to manage closures where possible (e.g. managed crossing and/or early re-provision) retaining rights of way as per current routes and seeking to minimise the effect on users. This hierarchy includes:
- Use of signage where PRoW can remain open but users need to be warned of the presence of construction vehicles (local management);
 - Implementation of short, temporary closures where local works might affect safety of users (local closures);
 - Closure of/extinguishment of a PRoW following the early implementation of an alternative/new route (e.g. via a new overbridge/underbridge) (early re-provision);
 - Closure of/extinguishment of a PRoW without re-provision (e.g. where works sequencing will not provide a new crossing in advance on the carriageway works) and/or permanent extinguishment of a PRoW (full closure); and
 - Provision of new crossings/routes as part of the scheme (new routes).
- 12.11.37 Each of these measures is described in further detail within the PRoW Management Plan in **Outline CEMP Annex M** (Volume 6 Document Ref 6.4 ES Appendix 16.1). Permanent closures without substitute are only proposed where necessary and where Cornwall Council agree that the value of the route is not sufficient to justify re-provision or diversion as part of the proposed development (for example a short length of PRoW at its terminus).
- 12.11.38 Although the above hierarchy will be applied wherever possible, the assessment has considered a worst case with a need to divert PRoW at locations where they interact with construction activities. These potential diversions and proposed new routes are shown on the Access, Rights of Way and Public Rights of Navigation Plans (Volume 2, Document Ref 2.5) and the DCO would provide the necessary powers to stop up PRoWs and implement diversions/new routes as submitted if necessary.
- 12.11.39 Pre-commencement condition surveys/inspections will be undertaken on any PRoW to be used by construction vehicles. Regular inspections on any installed temporary diversions or alternative routes will also be undertaken with any short-term damage repaired where necessary.
- 12.11.40 It is assumed that during construction, Highways England or its contractor will also provide a Public Liaison Officer and/or operate a Community Relations team with contact details to be provided on relevant signage located along the PRoW network (for example, giving notice of temporary closures/diversions). Concerns around condition can therefore be flagged through this procedure and Highways England will explore any short-term reinstatement work where necessary. Any concerns raised will be shared with Cornwall Council PRoW Officers for discussion when appropriate.

Walkers, Cyclists and Horse-riders during construction

12.11.41 The construction phase of the scheme is anticipated to lead to a variety of effects on the PRow network, ranging from increased construction traffic on or in close proximity to PRow, through to a need to extinguish PRow in order to enable construction works.

12.11.42 In summary, the following PRow management is anticipated during construction:

- Local management/closures along five BOATs, one bridleway and one footpath to enable construction access and to warn both users of the PRow network and construction workers of the interaction with these PRow.
- Permanent closure of section of one BOAT, one Bridleway and two Footpaths to enable the construction of the proposed scheme.
- Permanent closure of one Footpath and two Bridleways with alternative/diversion routes provided.

12.11.43 The construction phase of the scheme is also anticipated to lead to a variety of effects on identified local routes (e.g. local walking, cycling and horse-riding routes without formal designation), as a result of the proposed scheme mainline or side roads severing existing routes.

12.11.44 In summary, the following local routes are anticipated to be severed:

- 3 no. sections of the 'Quiet Lanes' network;
- A short section of NCN32, The Cornish Way; and;
- A short section of the Link to NCN32.

12.11.45 In all cases, realignment or diversion of these local routes is proposed, utilising new side roads, overbridges and junctions where possible to maintain access for users.

12.11.46 On appointment of a contractor, diversion routes for traffic as part of a **Traffic Management Plan** (Volume 6 Document Ref 6.4, ES Appendix 2.1) would be prepared and agreed with Cornwall Council. For the purposes of this assessment (prior to the appointment of a contractor) it is assumed that where any PRow forming part of or interacting with a traffic management route, appropriate local management and signage would be provided as agreed with Cornwall Council.

12.11.47 Where it is necessary to stop-up PRow for construction activities, the provision of alternatives routes/diversions will ensure that access across the new A30 is maintained at key points.

12.11.48 Seven new routes are proposed, utilising private means of access and seeking to improve connectivity between existing and proposed PRow. These seek to provide enhancement/improved linkages on the PRow network with an aim of reduce severance and linking up existing PRow. Appropriate design parameters and materials will be provided for substituted and new PRow, taking into account the proposed type and nature of the proposed PRow.

- 12.11.49 There are a range of negligible to medium sensitivities and negligible to moderate magnitudes of impact. A summary of the assessed effects to the PRow and local route network during construction is provided in Table 12-18, which reflects the information provided on the Access, Rights of Way and Public Rights of Navigation Plans, with Schedule references as appropriate³¹.
- 12.11.50 Overall, during construction, with the implementation of management as described, it is considered that there will be a short-term and slight adverse effect on the PRow network and local routes, which is insignificant.
- 12.11.51 In summary there would be ten slight adverse, six neutral and eight slight beneficial WCH effects along the scheme. There would only be one likely significant effect on walkers, cyclists and horse-riders, with a moderate adverse impact to be experienced at BOAT 309/25/2 [PR1], which would be stopped up without re-provision. However, a site visit to BOAT 309/25/2 [PR1] has shown that the quality and value (condition) of the route is poor and low. Furthermore, an alternative route already exists on the adjacent BOATs 309/25/3 and 309/25/4 allowing users to continue journey's in this locality. Those details have been agreed with Cornwall Council in the associated PRow Management Plan in **Outline CEMP Annex M** (Volume 6 Document Ref 6.4 ES Appendix 16.1).

³¹ The Schedule summarises the works to existing and proposed routes that require consent, and these are cross referenced on the relevant plans and tables with a 'PR' reference value.

Table 12-18 Effects to the PRow and Local Route Network

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
BOATs 309/25/3, 309/25/4, 309/25/5, 309/25/6 and 309/25/7	West of Chiverton Cross roundabout	Local management/short-term closures are likely to be required in order to facilitate construction of attenuation ponds in this area. It is currently anticipated that access along these routes could be retained through local management.	Medium	Minor	Slight adverse
BOAT 309/25/2 [PR1]	West of Chiverton Cross, running east-west between BOAT 309/25/6 and BOAT 309/25/3	Construction of attenuation ponds to serve the new A30 – access will no longer be possible. Users will retain access along BOAT 309/25/3, 309/25/5 and 309/25/4	Medium	Moderate	Moderate adverse
New Restricted Byway [PR2]	Via a new underbridge allowing movements across the Carland Cross Junction	Users will be able to utilise new shared footway/cycleway adjacent to the carriageway connecting a new underbridge provided to facilitate north – south movements across the new junction at Carland Cross and between current road network north to St Newlyn and south on the A39 to Truro. A new underbridge with appropriate lighting and access restrictions to prevent use by vehicles as necessary, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
New Restricted Byway [PR3]	Between arms of the new Carland Cross grade separated junction	Users will be able to navigate the new junction through utilising new footway/cycleway links, removing the need for users to cross numerous arms of the new roundabout. This would help enable safe movements around the new roundabout junction, in combination with the new underbridge to the west. New restricted byways to north and south of new Carland Cross junction, providing east-west movements around the roundabout, with access restrictions to prevent use by vehicles as necessary, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial
BR 314/64/1	Off the B3284 adjacent to Callestick Vean	Local management may be required when construction works are occurring to create the new side road which connects to this section of the B3284. It is currently anticipated that access from the bridleway to the B3284 could be retained through local management.	Low	Negligible	Neutral
New Bridleway [PR4]	Between existing BR 314/64/1 and BR 314/65/1 utilising new private means of access	Opportunity to connect two existing bridleways, providing improved recreational routes within the area. New bridleway connection between two existing bridleways on private means of access with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
New Footpath [PR5]	South of Creegmeor Farm and BR 314/65/1	Proposed steps to provide a connection up to the new side road and onto the new junction connecting into the existing local route (quiet lane) at Chybucca Steps to provide access to the side road, likely to be unsuitable for horse-riders due to physical constraints and gradient	Medium	Minor	Slight beneficial
Quiet Lane	Route crosses current A30 at Chybucca	Quiet Lane to be diverted through proposed Chybucca junction Quiet Lane severed by proposed scheme mainline	Low	Minor	Neutral
BR 309/3/1 [PR6]	East of Chybucca junction running North – South from existing A30 to the B2384	The proposed route of the new A30 bisects the current bridleway. The bridleway will continue along its current route from the B2384 and stop prior to meeting the new A30. It is understood that the existing bridleway does not have access onto the current A30 at this location.	Low	Moderate	Slight adverse
New Bridleway [PR7]	West of NFH, south of the A30	To provide new connection between FP319/16/1, Quiet Lane and new side road at Tresawsen New bridleway joining and along new private means of access and over new green bridge, with access restrictions to prevent use by vehicles as necessary, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
FP 319/16/1 [PR8]	NFH/Marazanvose	A short section of FP 319/16/1 is to be permanently extinguished where the new A30 crosses its currently alignment but replaced with steps which routes alongside the south of the new A30 before crossing via a new 'green bridge' as a bridleway onto the existing road to Higher Ventongimps Farm.	Medium	Minor	Slight adverse
Quiet Lane	Route crosses current A30 west of NFH	Quiet Lane to be diverted across new green bridge to the east, or along new private means of access to the west connecting into Tresawsen Quiet Lane severed by proposed scheme mainline	Low	Minor	Neutral
NCN32	Shortlanesend Road west of Zelah	NCN32 to be diverted at Henvor Lane to the west along the realigned existing A30 and then north on the old A30 through to Zelah	Medium	Minor	Slight adverse
BR 319/9/1 [PR9]	Near to Hill House	Eastern section of BR319/9/1 from Hill House to intersection with BR 319/1/1 to be permanently extinguished. BR 319/9/1 to be diverted onto new private means of access to Hill House to allow continued access.	Medium	Minor	Slight adverse
BR 319/1/1 [PR10]	Zelah Lane Farm	Southern section of BR 319/1/1 to be permanently extinguished where it currently routes onto the existing overbridge. Section of BR 319/1/1 to be extinguished to be diverted/re-provided on new overbridge which will form a private means of access to Zelah Lane Farm.	Medium	Minor	Slight adverse

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
FP 319/1/2	South of existing A30 at Zelah Lane Farm	Local management may be required during works to provide the new overbridge and new private means of access to Hill House. It is currently anticipated that access along the footpath could be retained through local management. A temporary diversion using the NCN32 route during short-term construction works would be made if required, subject to discussions and agreement with Cornwall Council as appropriate.	Medium	Minor	Slight adverse
New Bridleway [PR11]	Crosses the existing A30 from the southern end of Church Lane in Zelah	Existing alternatives access severed by proposed scheme mainline and would provide north-south access across the A30 New bridleway connection, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial
FP 319/12/1 [PR12]	East of the A30 adjacent to Trevalso Cottage	This short section of footpath is almost entirely removed given the proposed alignment of the new A30.	Negligible	Moderate	Slight adverse
National Cycle Network – Route 32 (the Cornish Way)	Route crosses the existing A30 at Chiverton Lodge.	NCN to be realigned with staggered junction to cross the proposed scheme NCN severed by proposed scheme side road	Medium	Minor	Slight adverse
Quiet Lane	South of Trevalso Farm	Quiet Lane to be diverted across new overbridge at Trevalso Farm Quiet Lane severed by proposed scheme mainline	Negligible	Minor	Neutral
Link to National Cycle Network – Route 32 (the Cornish Way)	Route crosses the existing A30 at Pennycomequick	Link to NCN to be diverted across new overbridge at Pennycomequick Link to NCN severed by proposed scheme mainline	Negligible	Minor	Neutral

PRoW type or reference/Schedule No [PRx]	Location	Reason for management and/or closure/mitigation to be secured by management plan	Sensitivity	Magnitude	Significance (construction)
FP 319/11/1 [PR13]	East – west south of the existing A30 at Pennycomequick and north of Honeycombe Farm	This short section of footpath is almost entirely removed given the proposed alignment of the new A30.	Negligible	Moderate	Slight adverse
Link to NCN32	Pennycomequick	Short section of Link to NCN32 to be stopped up to all but emergency vehicles across the A30 (north-south) and diverted to the east along a new overbridge	Negligible	Minor	Neutral
New Bridleway [PR14]	South of Carland Cross	To provide safe crossing facilities via a new underbridge in a north-south direction New restricted byway via a new underbridge onto the existing A30 to junction with A39, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial
New Bridleway [PR15]	South East of Carland Cross	To provide new connection between existing side roads, footpaths and bridleways in surrounding area New bridleway adjacent to the new private means of access, with access restrictions to prevent use by vehicles as necessary, with unsealed surface unless otherwise agreed by Highways England and Cornwall Council	Medium	Minor	Slight beneficial

Walkers, Cyclists and Horse-riders during operation

- 12.11.52 Classifications of substituted and new PRow have been discussed with Cornwall Council, who will update their Definitive Maps as necessary, following notification of completion of works by Highways England and its contractor.
- 12.11.53 Surfaces would be restored/be as per existing post construction. Suitable surfaces for different types and classification of routes will be provided, taking into account relevant guidance, for example from the British Horse Society³². For multipurpose routes (e.g. routes providing private means of access and a bridleway) details of surfaces and access restrictions features (e.g. demountable bollards) will be agreed with the landowner and/or third party responsible for maintenance and/or use of that surface and/or route. Details and specifications for substituted and new PRow, including scale, surface materials, access features and signage are set out in **The project** (Volume 6 Document Ref 6.2 ES Chapter 2).
- 12.11.54 Highways England and its contractor will provide appropriate signage for re-provided and new PRow in agreement with Cornwall Council.
- 12.11.55 Side road footpaths/cycleway provision will be provided by Highways England where existing and/or proposed would benefit, for example through particular junctions and north-south crossings. Details will be shown on the **Access, Rights of Way and Public Rights of Navigation Plans** (Volume 2, Document Ref 2.5), supporting the DCO application.
- 12.11.56 Relevant ownership and maintenance agreements are detailed in the relevant section of the Statement of Common Ground with Cornwall Council, following associated discussions (Volume 7, Document Ref 7.4).
- 12.11.57 Where the proposed scheme severs local routes, the provision of alternative routes/diversions will ensure that access across the new A30 is maintained at key points during operation.
- 12.11.58 During operation, the existing routes would experience similar conditions as per existing, whilst new routes would continue to provide slight benefits.
- 12.11.59 Reclassification and a significant reduction in traffic flows would also facilitate and allow improved conditions for walkers, cyclists and horse-riders along the existing A30. The associated reduction in severance may encourage increased travel by active modes, with further benefits to physical activity.
- 12.11.60 The sensitivity of receptors during operation would remain negligible to medium and magnitudes of change will be minor to moderate taking into account similar or improved conditions. Overall there is likely to be a long-term and slight beneficial effect during operation.

³² <http://www.bhs.org.uk/~media/bhs/files/pdf-documents/access-leaflets/surfaces.ashx?la=en>

Amenity effects

- 12.11.61 In assessing the potential for specific indirect amenity effects, consideration has been given to conclusions drawn elsewhere in the Environmental Statement, for example including **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5).
- 12.11.62 A Construction Environment Management Plan and Traffic Management Plan **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1) and (Volume 6 Document Ref 6.4, ES Appendix 2.1) has been prepared and support the DCO application. It explains the issues and proposed measures to help ensure any potential adverse impacts during construction are reduced or avoided where possible.
- 12.11.63 Where PRoW or local routes run in close proximity to construction compounds or activities, best practice mitigation (e.g. screening) would help reduce any adverse amenity impacts (as detailed in **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1)).
- 12.11.64 The Landscape and Visual Impact assessments demonstrate that there would be significant residual visual impacts at the following WCH facilities only:
- Pedestrians using footpath 319/16/1;
 - Pedestrians and equestrians using bridleway 319/9/1; and
 - Cyclists using NCN 32 near Herver Lane.
- 12.11.65 **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5) and **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) assessments have not identified any significant effects on WCH facilities and in any case any adverse impacts would be temporary and insignificant given WCH users would typically pass through an area close to the scheme (typically where there could be increases in air and noise levels as a result of the scheme) so being exposed to any differences for a short period of time only (a temporary effect).
- 12.11.66 Given the sensitivity of WCH routes to amenity changes is typically low, it is considered that for the purposes of this assessment and based on the methodology set out in Table 12-3 there would be a negligible impact on amenity effects on WCHs, with likely slight adverse effects during construction and neutral effects during operation.

12.12 Assessment of Effects – Communities

Settlements, access to services/green space

Settlements, access to services/green space during construction

- 12.12.1 The combination of construction effects may lead to a reduction in local residents' satisfaction with their living environment, and potential changes in behaviours such as use of footpaths and outdoor spaces. Air emissions from construction vehicles and machinery would not lead to any significant direct health effects. The dwellings nearest to the scheme would be at risk of dust impacts from earthworks, but with mitigation in place, dust emissions will be minimised. However, any occurrence of dust deposition would add the perception of overall impact on local amenity during construction.
- 12.12.2 During construction, the character of the small settlements along the A30 such as Zelah, Blackwater and Tresawen would be affected by the visual appearance of construction activities including the presence of compounds, earthworks and machinery. Noise effects would be temporary and at their worst in close proximity to the proposed scheme alignment.
- 12.12.3 Nuisance due to noise, dust and visual impacts as well as the disturbance caused by the movements of construction vehicles will be mitigated through considerate construction management including the use of screening (temporary or permanent), which will be outlined in further detail in the **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1). With mitigation in place, the effect on neighbourhood amenity during the construction stage would be temporary and short-term and is not considered to be significant.
- 12.12.4 During construction, there may be some congestion and delays where the scheme would involve online working, for example where it would tie in with the existing A30. This may cause increased journey times and a reduction in the reliability of bus services. Temporary impacts on PRow and cycle routes are also anticipated such as short lengths of diversions. This may cause a temporary reduction in the accessibility of services in particular within and around Blackwater, Zelah and Truro. This could result in short-term slight adverse effects on all travellers.
- 12.12.5 Traffic Management Measures would be planned and approved with discussion between Highways England, its contractor and Cornwall Council, to help mitigate potential adverse impacts on all travellers and the communities in which they reside.
- 12.12.6 Given their local scale and settlement category ranking E to F, it is considered their sensitivity is low. Given the effects would be temporary and with mitigation, the magnitude of change is likely to be minor. As such the significance of effect during construction would be slight adverse.

Settlements, access to services/green space during operation

- 12.12.7 As explained in earlier sections of this assessment, the average forecast peak period traffic flows on local roads near the A30 as a result of the scheme following its completion, show a reduction. Whilst there would be increases along some sections of roads joining the A30, in general terms traffic on local roads

interacting with the A30 between Chiverton and Carland Cross would reduce by up to 40%, making the local roads less trafficked.

- 12.12.8 In addition, even with forecast traffic growth there would be up to an average 9-minute journey time saving between Chiverton and Carland Cross as a result of the scheme, with potential further savings at times of incidents and delays³³.
- 12.12.9 As such, reduced delays and improved travel conditions and journey times as a result of the scheme are likely to contribute positively to accessibility to communities, facilities and services during operation, with overbridges and underbridges provided as part of the proposed A30 in order to facilitate north to south movements.
- 12.12.10 As set out in the WCH section of this assessment, routes would be maintained as far as possible, whilst there would also be new routes implemented as part of the proposed scheme. Substitutions for those affected by construction works would be in place before the highway works where possible, to help avoid reduced accessibility. The same approach will be taken to private means of access. The new underbridges and overbridges would improve WCH access throughout the operation of the scheme and offer an enhanced access to nearby community facilities along the A30 particularly at Tolgroggan overbridge and Trevalso Lane, allowing cyclists and pedestrians to access community facilities at Zelah. As such, people should be able to continue using WCH routes for commuting, leisure and/or accessing open space and services. That in turn would help ensure physical activity is not adversely affected.
- 12.12.11 Overall, there are not expected to be any significant effects, with likely slight beneficial effects during operation given the minor benefits to accessibility.

Employment

Employment during construction

- 12.12.12 During construction the scheme is expected to bring a number of potential effects to the local and regional economies.
- 12.12.13 Using data from Highways England, it is estimated that at its peak the proposed development will employ approximately 500 people. This is anticipated to include approximately 350 construction workers (70% of total) and 150 wider project staff (30% of total). This volume of construction resource is anticipated to remain fairly constant over the bulk of the construction programme (approximately 22 months) with a lesser employment demand during mobilisation (first 6 months) and project handover/commissioning (final 3 months). During the tail periods, demand is estimated to be between 20 and 30 people. This leads to an average workforce demand over the 31-month programme of approximately 362 workers per month.
- 12.12.14 Given the geographic location of the proposed scheme and the type/volume of construction skills required, it is anticipated that a large proportion of the construction workforce will be 'imported' into the area and therefore made up of workers travelling from outside the area and staying locally.

³³ Forecast journey times show that there could be up to 5m46s savings in average journey time in 2023 (WB, AM peak), rising to up to 8m50s saving in average journey time savings by 2038 (EB, PM peak) between Chiverton and Carland Cross

12.12.15 At this stage of the project, the following assumptions in relation to the proportion of local/non-local workers have been made:

- Wider project staff – assumed that between 70-80% will reside outside of the local area. At peak this would be 105 and 120 of the 150 staff.
- Construction workers – assumed that between 60-70% will reside outside of the local area. At peak this would be between 210 and 245 of the 350 staff.

12.12.16 This brings both potential beneficial and negative impacts for the local economy and the accommodation sector. The presence of non-local staff within the workforce would lead to demand for accommodation within the study area.

12.12.17 Based on a peak non-local workforce of between 315 and 365 workers there would be a significant demand for accommodation locally over an extended period (approximately 22 months).

12.12.18 As identified in the baseline, the settlements immediately adjacent to the proposed scheme have a good supply of serviced and non-serviced accommodation and would likely be able to accommodate the workforce demand during off-peak times when occupancy rates are low (circa 30%). This could bring beneficial effects to the local accommodation sector during the construction programme, bringing additional trade at their quietest times of the year. However, during the peak tourist season, occupancy rates can increase to approximately 80% and there would not be sufficient bedspace capacity within the local area (Truro, Cambourne and Redruth) to accommodate the likely workforce demand.

12.12.19 In considering this, the baseline (see paragraphs 3.7.90-94) identifies that the provision locally is only a small proportion of the wider bedspace provision in Cornwall and taking that into account, there should generally be sufficient accommodation to service the workforce in addition to tourists and other visitors (including private trips) within the wider area during construction. During peak tourism periods, Highways England would consider instructing or directing their workforce to stay in accommodation outside of the study area where there is capacity during those peaks, with suitable travel arrangements as appropriate and if necessary. If required, Highways England would discuss and agree suitable instructions/directions with Cornwall Council and Visit Cornwall as appropriate.

12.12.20 It has been assumed, based on experience of other highways projects, that non-local workers would, on average stay locally around 14 nights a month (between 3-4 nights per week).

12.12.21 Applying these assumptions leads to the workforce split shown in Table 12-19.

Table 12-19 Workforce Demand

Construction Stage	Total Workforce Demand	Local Workforce	Non-local Workforce
Mobilisation (6 months)	20 per month	4 – 7	13 - 16
Main Stage (22 months)	500 per month	135 – 185	315 - 365
Demobilisation/commissioning (3 months)	30 per month	8 – 11	19 - 22

- 12.12.22 This brings both potential beneficial and negative impacts for the local economy and the accommodation sector. The presence of non-local staff within the workforce would lead to demand for accommodation within the study area. Based on a peak non-local workforce of between 315 and 365 workers there would be a significant demand for accommodation locally. As identified in the baseline, the wider study area has a strong tourism offering and accordingly has a range of temporary accommodation options.
- 12.12.23 In addition, the non-local workers would bring new spend into the local economy which would bring benefits to businesses such as accommodation providers, restaurants and convenience retailers. The Construction Industry Joint Council: Working Rule Agreement, which covers over 500,000 workers within the UK construction industry, incorporates a subsistence (lodging) allowance of £36 per night³⁴. This represents additional spending within the local economy which would not occur without the proposed development.
- 12.12.24 Applying this spend to those non-local workers, on the assumption that non-local workers would stay locally between 3 and 4 nights per week, it is estimated that the proposed development could bring in the region of £3.6m to £4.1m additional spend into the local economy over the 31-month construction period. This is relatively small when compared to the overall tourism spend in Cornwall which stood at approximately £1.9bn in 2016, but nonetheless is not an insignificant level of spend in the local area,
- 12.12.25 Given the limited reliance local people have on the construction industry for employment, the sensitivity is considered to be low. Taking into the mixed impacts the scheme's construction would have on employment, accommodation and associated spend, the magnitude of change is considered to be minor. Overall, there is considered to be a slight beneficial effect expected during construction³⁵.

Employment during operation

- 12.12.26 There would be limited employment benefit as a result of the scheme during its operation, beyond typical maintenance arrangements. However, benefits of the scheme could continue to be experienced by the local labour force as a result of skills and training learned from working on or as part of the supply chain servicing the scheme's construction.
- 12.12.27 Highways England and its contractor will discuss initiatives where legacy benefits could be realised and achieved, for example with targeted recruitment and training as well as apprenticeships utilising partnership arrangements with local educational institutions.
- 12.12.28 As a result, assuming that there would be local construction worker and training benefits, as well as supply chain service benefits (with associated multiplier effects) there could be minor positive impacts and, overall, slight beneficial effects in the longer-term.

³⁴ UCATT, Construction Industry Joint Council: Working Rule Agreement. Available online at: <https://www.ucatt.org.uk/ciic-construction-industry-joint-council-working-rule-agreement> [accessed May 2017]

³⁵ It is not assumed or envisaged that there would be displacement of demand from the tourism sector which could typically yield higher rates/income

Community safety

Community safety during construction

- 12.12.29 During the construction phase, there would be temporary HGV movements, while construction traffic for any delivery of new materials to site would primarily use the existing A30 but will access the construction site and compounds off the associated side roads, including the A390, B3284, A39, Allet Road, Shortlanesend Road and Pennycomequick Road.
- 12.12.30 To help mitigate or avoid adverse impacts on the local communities accessed from those roads, a haul road would be established by the contractor through sections of the alignment, with site-won material to be moved using the haul road rather than the existing A30 and its side roads where practicable, with plant crossings required on some of the side roads as necessary. Details will be provided in the Traffic Management Report³⁶.
- 12.12.31 The CEMP also outlines mitigation measures to help ensure the safety of the local community during works. For example, clear signage and best practice techniques would be applied. When work is required online, a series of traffic management measures will be implemented including single way working of traffic in each direction maintained at all times. A mandatory 40mph speed limit would be imposed where construction occurs in the vicinity of the existing A30.
- 12.12.32 Overall the sensitivity is considered to be low to moderate to take into account the varying accident rates along the A30. The magnitude of change is likely to be minor given the mitigation measures proposed. As such, the impact on community safety during works could be slight adverse depending on the proximity of communities to construction works. With mitigation in place, the effect on community safety during the construction stage is not considered to be significant.
- 12.12.33 Design features would take into account DMRB guidance in relation to safety, including appropriate lighting to benefit the security of those using or crossing the scheme. That is described in more detail within the project description in **The project** (Volume 6 Document Ref 6.2 ES Chapter 2).

Community safety during operation

- 12.12.34 Traffic modelling results show that with the scheme in place, over the appropriate 60-year appraisal period, the forecast reduction in accidents is expected to be 772. As set out earlier in the baseline section of this assessment, the existing section of A30 between Chiverton and Chybucca has nearly double the national average of personal injury accidents (PIAs). The accident analysis software (COBA-LT) assumes national average accident rates for the future year scenario with the scheme compared to the rates without the scheme. For the new section of dual carriageway between Chiverton and Chybucca the accident rate would be in-line with the national average, which is a much-reduced accident rate, largely as a result of the safe and modern design standard of the new road. The fear of accidents would therefore be reduced.

³⁶ Volume 6, Document Ref 6.4, ES Appendix 2.1

12.12.35 Furthermore, the average forecast peak period traffic flows on local roads near the A30 as a result of the scheme, show a reduction with traffic on local roads reducing by up to 40%. That would result in the local roads experiencing, on average, less traffic. Those conditions would be favourable to community severance, the movement of people, and safety.

12.12.36 Overall, the magnitude of change is considered to be minor to moderate, taking into account the varying accident rates along the existing A30. As such, overall there would be slight community safety benefits as a result of the scheme.

Health

12.12.37 Volume 6 Document Ref 6.4 ES Appendix 12.1 provides the **Health Impact Assessment** for the scheme, which considers impacts during construction and operation.

12.12.38 The Health Impact Assessment considers a wide range of vulnerable people and different groups along with the wider community.

12.12.39 A summary of the full assessment is provided below in relation to people living and working in the adjoining wards to the scheme, which is of most relevance to the study area identified for the assessment of communities.

Health during construction

12.12.40 Adverse effects have been identified for people relating to air quality, noise and neighbourhood amenity. Mixed neutral and adverse effects have been identified for access to healthcare services and other social infrastructure (including education), accessibility and active travel, and climate change. Those largely relate to works and associated temporary disruption and nuisance caused.

12.12.41 Mixed neutral and positive effects have been identified for access to work and training. Those largely relate to construction and serving job opportunities as a result of the scheme.

12.12.42 The assessment does not identify any significant health effects associated with the scheme during construction.

Health during operation

12.12.43 Neutral effects have been identified for crime reduction and community safety as well as climate change.

12.12.44 Mixed neutral and positive effects have been identified for:

- a) Access to healthcare services and other social infrastructure (including education);
- b) Access to open space and nature;
- c) Air quality, noise and neighbourhood amenity;
- d) Accessibility and active travel; and
- e) Access to work and training.

12.12.45 These would primarily be a result of the improved road network, reduced congestion and faster journey times. Once completed, access to open space and active travel would also be improved, which bring health benefits to those people who make use of the new and improved assets.

12.12.46 The assessment does not identify any significant health effects associated with the scheme during operation.

12.12.47 The assessment of health has also helped inform an assessment of amenity effects, which is considered below.

Residential amenity

12.12.48 In assessing the potential for specific indirect amenity effects, consideration has been given to conclusions drawn elsewhere in the Environmental Statement, for example including **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5).

Residential amenity during construction

12.12.49 A Construction Environment Management Plan and Construction Traffic Management Plan have been prepared and support the DCO application³⁷. They explain the issues and proposed measures to help ensure any potential adverse impacts during construction are reduced or avoided where possible.

12.12.50 Where existing settlements and facilities are situated within close proximity to construction compounds or activities, best practice mitigation (e.g. screening) would help reduce any adverse amenity impacts (as detailed in the **Outline CEMP** in Volume 6 Document Ref 6.4 ES Appendix 16.1).

12.12.51 During the construction phase no significant landscape effects are predicted.

12.12.52 Temporary significant construction noise effects have been identified at a number of residential properties:

- Highfield (also representative of The Annex and Burrow Farm);
- Roscarnick Farm;
- Elmsleigh (also Barn Wyn, Treffry Cottage, 1 The Cottages, Ranger Barn),
- Henvver Lane Cottage (also Henvver Cottage);
- Pennycomequick;
- Honeycombe Barn (also Honeycombe House and residential Caravan).
- The Stables and nearby residences;
- Callestick Vean Bungalow;
- Nacarrow Farm Villa;
- Zelah Lane Farm, Zelah Lane Farm Annexe, Trolgroggan Bungal, Chapel Cottage, The Nook Zelah Lane and The Chapel; and
- Church Lane and nearby residences.

12.12.53 Temporary significant construction noise has also been identified for a number of non-residential receptors:

- Mithian Church Hall,
- The Church of St Peter,
- NFH wedding venue; and
- Trevarth Holiday Park.

³⁷ Volume 6 Document Ref 6.4 ES Appendix 16.1 **Outline CEMP**

12.12.54 In terms of sensitive air quality receptors, 246 have been identified within 200m of compound sites and soil storage areas as well as within 200m of construction and demolition areas within each of the four construction, demolition and trackout sections.

12.12.55 In addition to human receptors, there are solar farms along the scheme which could be affected by dust. Overall it is identified that the scheme could impact receptors during the construction phase but with mitigation it is considered there will be no significant effects.

Residential amenity during operation

12.12.56 The Landscape and Visual Impact assessments (Volume 6 Document Ref 6.4 ES Appendix 7.5 **Visual assessment table – operation**) predicts that there would be significant residual visual impacts at the following receptors only:

- Residents at Maranzavose;
- Residential receptors at Hill House;
- Residential receptors at Zelah Hill Cottage, Mount Pleasant, and Tregorlands;
- Residential receptors at Pennycomequick; and
- Residential receptors at Journey's End, Racland House, and Four Winds.

12.12.57 From an amenity perspective, residential receptors will be experiencing long term minor adverse effects from this visual change although this is not considered to be significant as the views will remain predominantly rural.

12.12.58 The noise assessment notes that many of the properties within the study area would exceed noise limit values in the absence of the scheme and some are already in Noise Important Areas. Notwithstanding this, the noise assessment identifies several communities as being subject to direct, likely significant adverse effects in 2038. These are all to the northwest of the scheme, as follows:

- Dwellings nearest to the proposed new Chiverton Junction around chainage 1+700.000; and
- Small groups of dwellings further from the scheme (approximately 250m) between chainages 1+500.000 and 2+000.000; and dwellings just beyond chainage 2+000.000.

12.12.59 For 34 other properties that are predicted to exceed recommended limit levels in the 2023 do nothing scenario, the noise assessment identifies reductions in noise by 2038 with the scheme. Properties within five noise important areas would also experience decreases in noise. These include:

- Four Burrows Farm House (NIA 13097),
- Marazanvose Farm group of dwellings (NIA 3291),
- Henvor Cottage (NIA 3292),
- Tregorland and Zelah Hill Cottage (NIA 3293); and
- Racland House and Four Winds (within NIA 3294)

12.12.60 The air quality assessment identifies that there are no modelled exceedances of the annual mean NO₂ objective in the baseline or in the Do-Minimum or Do-Something 2023 scenarios along the A30. As such there are no predicted exceedances with the scheme in place. The regional air quality assessment shows a decrease in emissions for each assessed pollutant on a regional scale, as a result of the scheme.

12.12.61 Overall at the community level, whilst there will be some benefits for some people along the existing A30 in terms of reduced traffic flows, reductions in noise and air pollution, the combined health and amenity effects from air quality, noise and landscape effects of the scheme are predicted to be long term, minor adverse effects overall. The cumulative effect is not considered to be of greater magnitude than this³⁸.

12.12.62 The sensitivity of residential receptors to amenity changes is typically medium. However, it is considered that for the purposes of this assessment, drawing on conclusions made elsewhere in the ES, and based on the methodology set out in Table 12-3, there would not be significant amenity effects on communities given the magnitude to change would typically be minor.

12.13 Assessment of Effects – Land and Property

Commercial Property/Businesses

12.13.1 Commercial property/business during construction

12.13.2 The design of the scheme has avoided where possible direct impacts on commercial property/businesses. Two direct effects would be experienced on businesses forming part of the local tourism and recreation offer (further detail is provided at section 12.13.29 onwards, taking into account Marazan Farm Campsite and NFH).³⁹

12.13.3 No other commercial property or business, other than agricultural land forming part of a farm holding, would experience a direct impact as a result the scheme.

12.13.4 Access arrangements would be maintained during construction to all identified commercial property/businesses. Through scheme design, appropriate access would continue to be provided. Key services would be signed subject to discussion and agreement between Highways England and Cornwall Council.

12.13.5 All identified commercial property/businesses are considered to be of a low to medium sensitivity, given their local nature and scale.

12.13.6 During construction works, there could be short term and minor impacts as a result of disruption and diversions. These are likely to be experienced most by those situated in closest proximity to the existing A30, and which rely most on the A30 for the movement of goods and people. Best practice construction techniques would be used to help reduce and avoid where practicable any likely adverse impacts. Details are provided within the Construction Environment Management Plan in **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1). Overall it is considered there would be temporary slight adverse effects. The assessment is detailed in Table 12-20.

³⁸ See **Health Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1)

³⁹ In summary, Marazan Farm Campsite would be required to be demolished, as well as a derelict barn at NFH (it should be noted that the barn has planning permission for conversion to a one-bedroom house, meaning it would no longer operate as part of the business operation). Marazan Farm and NFH, including its wedding venue, are considered as tourism and recreation assets, which are more sensitive to amenity changes.

Commercial property/business during operation

- 12.13.7 The commercial properties/businesses identified within the study area are not considered to be particularly sensitive to amenity changes, which are more relevant to tourism facilities and certain sensitive businesses that rely on these surroundings. It is however considered that the scheme once operational would bring accessibility benefits to many of the existing businesses situated along and near to the A30 by virtue of improved transport conditions.
- 12.13.8 Those that would experience reduced accessibility are situated off the Chiverton roundabout, which would experience an increased journey length of around 1km for vehicles exiting the A30. However, the benefits to journey times and journey time reliability by virtue of the improved travel conditions would likely offset this impact. It should also be noted that those premises not only serve A30 users but the local communities and visitors who utilise their services by accessing local roads.
- 12.13.9 As such, there are expected to be slight beneficial impacts overall as a result during operation, with no likely significant effects on commercial property/businesses. The assessment is detailed in Table 12-20.

Table 12-20 Assessment of Commercial Properties and Businesses

Receptor	Sensitivity	Magnitude	Significance (construction)	Significance (operation)
Trevisson Park Offices	Low	Negligible	Slight adverse	Slight beneficial
Town and Country Motors (Nissan)	Medium	Minor	Slight adverse	Neutral
Shell Garage	Medium	Minor	Slight adverse	Neutral
Parkland Toyota	Medium	Negligible	Slight adverse	Slight beneficial
Total Garages	Medium	Minor	Slight adverse	Neutral
Starbucks	Medium	Minor	Slight adverse	Neutral
Solar farm south of Town and Country Motors	Low	No change	Neutral	Neutral
Wind farm at junctions joining A30 with B3284	Low	No change	Neutral	Neutral
Solar farm west of junctions joining A30 with B3284	Low	No change	Neutral	Neutral
Solar farm east of Trevisson Park Offices	Low	No change	Neutral	Neutral
Claude Holman Van Sales	Low	Minor	Slight adverse	Neutral
Scottish Power Renewables and wind farm	Low	No change	Neutral	Neutral
Wind farm east of Trevisson Park Offices	Low	No change	Neutral	Neutral
Nijhuis H20K Industries	Medium	Negligible	Slight adverse	Slight beneficial
Allstore Storage	Low	Negligible	Slight adverse	Slight beneficial
Acland Plant Hire	Low	Negligible	Slight adverse	Slight beneficial
Truro Sawmills	Medium	Negligible	Slight adverse	Slight beneficial
Homequest Property Management	Low	Negligible	Slight adverse	Slight beneficial
West Country Cars	Low	Negligible	Slight adverse	Slight beneficial
Blackwater Studios	Low	Negligible	Slight adverse	Slight beneficial
Cornish Rose Company	Medium	Negligible	Slight adverse	Slight beneficial
Solar farm south of junctions joining A30 with B3284	Low	No change	Neutral	Neutral
RBS Groundworks & Plant Hire	Low	Negligible	Slight adverse	Slight beneficial
Kernoda Ltd	Low	Negligible	Slight adverse	Slight beneficial

Receptor	Sensitivity	Magnitude	Significance (construction)	Significance (operation)
Penstraze Sawmill	Medium	Negligible	Slight adverse	Slight beneficial
The Flower Shed, Trebilcocks	Low	Negligible	Slight adverse	Slight beneficial
Fourwinds Garage Mitchell Ltd	Low	Negligible	Slight adverse	Slight beneficial
Mitchell Fruit Garden	Medium	Negligible	Slight adverse	Slight beneficial
Cube Recording Studio	Low	Negligible	Slight adverse	Slight beneficial
Greyhound Lugger Sailing	Low	Negligible	Slight adverse	Slight beneficial
Cornwall Environmental Consultants Ltd	Low	Negligible	Slight adverse	Slight beneficial
Mike Coad Car & Commercial	Low	Negligible	Slight adverse	Slight beneficial
Truro Farm Machinery	Low	Negligible	Slight adverse	Slight beneficial

Agricultural Land

12.13.10 An Agricultural Impact Assessment (AIA) has been undertaken to quantify the scheme's land take both temporarily and permanently, describing any agreed mitigation. The **Agricultural Impact Assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.5), assesses the impact of the scheme on land use and assesses impacts on individual farm units (plots) forming part of a farm holding, taking into account agricultural land quality and the likely impact on its functionality in terms of severance and access. A summary of the full assessment for temporary and permanent land take is provided below.

Agricultural land during construction

12.13.11 The proposed scheme would lead to the temporary loss of approximately 28.1ha of agricultural land classified as best and most versatile (Grades 2 and 3a) with a further 9.8ha of lower quality agricultural land and 15ha of non-agricultural land also temporarily lost. Based on criteria set in Section 2 and given the majority of land would be BMV a medium sensitivity has been applied. With over 20ha of land being required the magnitude of impact would be high, leading to a moderate adverse effect which would be significant.

12.13.12 However, given the temporary nature of the land take and with mitigation proposed in **Outline CEMP** (Volume 6, Document Ref 6.4, ES Appendix 16.1) which would see land returned to its former use, the construction phase of the scheme is not considered to lead to any long-term residual significant effects on agricultural land.

12.13.13 The following temporary land take requirements are needed to enable construction of the proposed scheme:

- 34 holdings experiencing temporary land take of less than 10% (negligible magnitude);
- 5 holdings experiencing temporary land take of between 10 and 25% (low magnitude);
- 2 holding experiencing temporary land take between 26 and 50% (medium magnitude); and
- 2 holding experiencing temporary land take of over 50% (high magnitude).

12.13.14 In general, those holdings where temporary land take is anticipated to be higher are those where temporary construction compounds or material storage areas are proposed on their land. Best practice construction mitigation would be employed throughout this stage of the project and all temporary land take would be returned to the land owner in a restored state following the completion of construction activities. Further details in relation to the construction management to be employed can be found in **Outline CEMP** (Volume 6, Document Ref 6.4, ES Appendix 16.1).

12.13.15 In assessing the impact of these temporary works, all farm holdings have been classified as medium sensitivity reflecting the temporary impact on BMV agricultural land at the majority of holdings.

12.13.16 Given the relatively small areas of land required to facilitate construction activities, the temporary nature of the works and the proposed management outlined within the CEMP, potential effects at the majority of plots/holdings are considered to be of negligible or low magnitude and therefore not significant.

- 12.13.17 The 2 holdings that are anticipated to experience temporary land take of 26-50% would experience a minor adverse and temporary effect given the scale of magnitude (medium), however this is not significant.
- 12.13.18 The 2 holdings where temporary land take would constitute over 50% would experience a moderate adverse and temporary effect, which would be significant. However, this effect would be mitigated through best practice construction practices and following the return of land to agricultural use there are anticipated to be no long-term adverse effects from the construction phase. It is worth noting 1 of the holdings effected where over 50% of the land take is temporary amounts to less than 1ha in size.
- 12.13.19 Severance during construction would be minimised through careful siting of construction compounds and lay down areas and careful planning of construction activities through consultation with the landowners, and mitigated in places by new temporary and permanent accesses. The construction stage is therefore not anticipated to lead to any significant effects on land holdings in terms of ongoing access or severance issues.

Wider potential temporary effects to agricultural land during construction

- 12.13.20 Alongside the above potential effects on agricultural land and the individual plots during construction, there are several potential wider effects that could arise during to construction activities. These are considered below.
- 12.13.21 Crop loss associated with temporary land take can be reduced by giving advanced warning to enable farmers to plan ahead and consideration of field drainage impacts during the design phase.
- 12.13.22 Certain farming activities could be affected by increased construction traffic on the local roads and traffic management measures such as temporary lights/diversions. Silage making for example can be constrained by timeliness as it requires uninterrupted flow of activity. Similarly, unrestricted access to fields is crucial during certain times of the year (e.g. harvesting) and activities can be disrupted should the transport chain between farm and field be cut off.
- 12.13.23 In areas of land which would be temporarily acquired, soils would be managed in accordance with DEFRA (2009) 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' whilst a Soils Management Plan would be followed, which will include details of how agricultural land will be restored at the end of construction. Nuisance from noise, dust and visual impacts due to movement of construction vehicles will be mitigated through considerate construction management including the use of screening (temporary or permanent) which will be outlined in further detail in an EMP to be submitted as part of the ES with the DCO application.
- 12.13.24 In extreme circumstances construction activities can cause disruption that could have an adverse impact on livestock or crops. For example, significant construction noise could affect livestock and significant dust and pollution generation could contaminate crops. Although with best practice construction methods this is considered unlikely, it should be noted and controlled where possible (e.g. frequent use of watering to suppress dust during adverse conditions).

12.13.25 These potential wider effects should be considered further at the detailed design stage and following the appointment of a contractor. Ongoing consultation with landowners and tenants aim to help Highways England and its contractor take into account any specific needs and inform mitigation measures as appropriate, to be agreed between the relevant parties if necessary. Appropriate financial compensation would be explored for landowners where temporary land acquisition is required, through negotiations.

Agricultural land during operation

12.13.26 The proposed scheme would lead to the loss of approximately 86.1ha of agricultural land classified as best and most versatile (Grades 2 and 3a) with a further 23.6ha of lower quality agricultural land and 34.3ha of non-agricultural land also lost. Based on criteria set in Section 2 and given the majority of land would be BMV (Grades 2 and 3a) a medium sensitivity has been applied. With over 20ha of land being required the magnitude of impact would be high, leading to a moderate adverse effect, which would be significant.

12.13.27 The data above shows the following broad effects:

- 22 holdings where under 10% of effected plots will be lost (negligible magnitude);
- 9 holdings where between 10 and 25% of the effected plots will be lost (low magnitude);
- 4 holdings where between 25 and 50% of the effected plots will be lost (medium magnitude); and
- 8 holdings where over 50% of the effected plots will be lost (high magnitude).

12.13.28 For those 8 holdings with a high magnitude (over 50% of plot(s) lost), it should be noted that 4 of these do not contain any BMV agricultural land. For these holdings whilst the magnitude would therefore be high, the sensitivity would be considered as negligible to low, leading to an overall negligible to minor adverse impact which would not be significant.

12.13.29 For the remaining 4 holdings their sensitivity would be considered medium and when combined with a high magnitude they would experience moderate adverse effects, which would be significant. It should however be noted that their plot areas and land taken is less than 1ha and therefore whilst the impact in terms of proportion of plot lost is high, the overall effect is considered to be minor adverse and not significant.

12.13.30 For all other holdings where permanent land take is required, even with an assumed medium sensitivity (as a worst case), the magnitude of effect would range between medium and negligible, leading to negligible, low or minor effects which would not be significant.

12.13.31 Potential severance effects during operation have been considered as part of the design development and the proposed scheme includes a number of new private means of access in order to mitigate potential severance effects. These arrangements have been designed in consultation with effected landowners and should therefore meet their long-term needs. A number of new overbridges and underbridges have also been included in the proposed scheme and designed to accommodate farm vehicles where necessary. The existing A30 would remain in use, providing continued access to farm holdings and plots where these currently take access from this road.

12.13.32 In addition, where necessary, Highway's England would seek to mitigate adverse effects through land negotiations in accordance with their relevant Compensation Code and discussions with the District Valuer.

12.13.33 Overall, given that steps have been or will be taken by Highway's England to avoid complete severance of land with no access, it is not considered that the proposed scheme would lead to any significant severance effects during operation.

Tourism and Recreation

Tourism and recreation during construction

12.13.34 As part of the scheme's construction, there would be one direct and unavoidable effect on Marazan Farm Campsite, where the main house and its outbuildings would be demolished to accommodate the scheme. The receptor is of low sensitivity given its local scale and high capability for its potential relocation elsewhere on available suitable land. The magnitude of impact is major, given the impact would be total loss of the facility. This would lead to a moderate adverse effect, which is significant. The impact would be mitigated with purchase by Highways England through negotiation, with an ongoing blight application being considered by Highways England in accordance with its relevant Compensation Code and discussions with the District Valuer.

12.13.35 There would also be one partially direct and unavoidable effect on the derelict barn at NFH, which would be demolished to accommodate the scheme. The receptor is of medium sensitivity but the barn does not form part of the operational function of the recreational asset. The magnitude of impact is moderate, given the impact would be a partial loss of the facility.

12.13.36 There would be further indirect effects on the remainder of the facility, including its wedding venue business, which is considered in the following section of the assessment, with mitigation helping reduce adverse impacts. The overall the effect would be slight adverse, which is not significant. The partial loss of the non-operational facility could be mitigated through property purchase/compensation subject to ongoing discussions with the landowner.

12.13.37 All other identified tourism and recreation receptors including the World Heritage Site are located outside of the order limits and therefore consideration has been given to potential indirect effects during construction.

12.13.38 The construction programme would be finalised by the main contractor in advance of the works. The duration of the works is currently estimated to require a construction period of at least 30 months. During construction, site compounds would not have any significant effect on any of the identified receptors. However, it is acknowledged that construction vehicles would be likely to cause increased traffic and associated temporary amenity impacts.

12.13.39 A traffic management plan would identify the key areas where the works impact on the existing A30 traffic flow with solutions to phase the construction works in such a way as to minimise the disruption and impact on the travelling public.

12.13.40 During the continued planning and development of the scheme the overall objective will be ensuring the safety of the travelling public and the workforce whilst minimising disruption to the public and visitor destinations.

- 12.13.41 There would be short term and temporary adverse effects along and in close proximity to the proposed alignment of the A30 scheme, which could cause a perceived reduction in wider accessibility across the region as a tourism destination, particularly during the summer peak. Best practice construction techniques would be used to help reduce and avoid where practicable any likely adverse impacts. Details are provided within the Construction Environment Management Plan. With the establishment of planting and other proposed mitigation measures, the effects will reduce in most cases in the longer term.
- 12.13.42 A Construction Environment Management Plan and Construction Traffic Management Plan have been prepared and support the DCO application. They explain the issues and proposed measures to help ensure any potential adverse impacts during construction are reduced or avoided where possible.
- 12.13.43 Where land and property are in close proximity to construction compounds or activities, best practice mitigation (e.g. screening) would help reduce any adverse amenity impacts (as detailed in the **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1)).
- 12.13.44 As explained earlier, for the purposes of this assessment, the World Heritage Site given its international nature is considered to be of a high sensitivity, whilst the more regional assets of Healy's Cyder Farm and NFH are of a medium sensitivity, with all others are considered to be of a low sensitivity. Given the generally indirect effects, the magnitude of change will generally be minor, with a slight adverse effect overall.

Tourism and recreation during operation

- 12.13.45 Within the Order Limits is the high sensitivity World Heritage Site Area 'Gwennap' (WHS Area 6), which is expected to experience a slight beneficial impact as a result of improved accessibility by virtue of improved travel conditions during operation. There would also likely be slight beneficial impacts to those WHS situated outside of the study area but accessed off the A30, including St Agnes (WHS Area 7), Camborne/Redruth (WHS Area 5) and Hayle (Area 2).
- 12.13.46 All other identified tourism and recreation receptors are located outside of the order limits and therefore consideration has been given to potential indirect effects during operation.
- 12.13.47 Once the proposed scheme is completed and operational, access to the identified receptors would be maintained and improvements in travel conditions by virtue of the scheme would improve accessibility in the study area and beyond. This would be particularly beneficial at peak times during summer months when congestion is often experienced, which could help remove a perceived barrier to tourism and accessibility to facilities and services with associated wider economic benefits. Overall, there would be likely slight benefits to all receptors in terms of accessibility.
- 12.13.48 In assessing the potential for specific indirect amenity effects, consideration has been given to conclusions drawn elsewhere in the Environmental Statement, for example including **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5).

12.13.49 The Landscape and Visual Impact assessments concludes that there would be significant residual visual impacts at the following receptors only:

- a) Recreational users of Newlyn Downs; and
- b) Open space land (description provided below in 'Other Land').

12.13.50 There would be slight/moderate beneficial visual impacts to the World Heritage Site west of Chiverton and users of the services at that location and insignificant adverse visual impacts elsewhere with mitigation.

12.13.51 No significant effects are expected taking into account air, noise and visual amenity effects assessed. In places, there would be residual benefits through design, mitigation and enhancement. For a detailed consideration of specific **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5) those relevant assessments should be read.

12.13.52 Given the sensitivity of recreational receptors to amenity changes is typically moderate, it is considered that for the purposes of this assessment and based on the methodology set out in Table 12-3, there would not be significant amenity effects.

12.13.53 A summary of the assessment of likely effects on tourism and recreation receptors is provided in Table 12-21.

Table 12-21 Tourism and Recreation Assessment

Receptor	Effect(s)	Sensitivity	Magnitude	Significance (construction)	Significance (operation)
Accommodation					
Chiverton Arms	Indirect	Low	Low	Slight adverse	Slight beneficial
Trevarth Holiday Park	Indirect	Low	Low	Slight adverse	Slight beneficial
Chiverton Caravan and Touring Park	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Goonwinnow Farm	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Summer Valley Touring Park	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Marazan Farm Campsite	Direct	Low	Major	Moderate adverse	N/A
Little Callestock Farm and Callestock Courtyard Cottages	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Fair View Farm	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Plume of Feathers	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Eateries/Venues					
The Hawkins Arms	Indirect	Low	Low	Slight adverse	Slight beneficial
NFH	Direct and Indirect	Medium	Minor and Low	Slight adverse	Slight adverse
Callestick Farm Ice Cream with Tearoom	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Visitor Attractions					
Chyverton Park Equestrian Centre	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Chiverton Riding Centre	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Colrairie Equestrian Centre	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Llama Land	Indirect	Low	Negligible	Slight adverse	Slight beneficial
Healey's Cornish Cyder Farm	Indirect	Medium	Negligible	Slight adverse	Slight beneficial

Allocated/Future Development Land

- 12.13.54 There are no known allocated development sites in the study area, or relevant planning applications, based on a review of the development plan and local site search at the time of the assessment.
- 12.13.55 The scheme would affect 6 proposed developments with planning permission, situated within 2km of the A30.
- 12.13.56 All proposed developments considered as part of this assessment have been taken into account as part of a consideration of cumulative effects (see Volume 6 Document Ref 6.2 ES Chapter 15 **Consideration of cumulative effects**), and are shown in Volume 6 Document Ref 6.3 ES Figures 15.1 and 15.2.

Allocated/future development land during construction

- 12.13.57 The design of the scheme has avoided where possible direct impacts on future development land.
- 12.13.58 For those developments that come forward before or during construction of the scheme, access arrangements would be maintained. Through scheme design, appropriate access would continue to be provided during operation.
- 12.13.59 All identified future development land is considered to be of a low to medium sensitivity, given its local nature and scale. The magnitude of change would be minor.
- 12.13.60 During construction works, there could be some short term and temporary slight adverse effects as a result of disruption and diversions. These are likely to be experienced most by those situated in closest proximity to the existing A30 and best practice construction techniques would be used to help reduce and avoid where practicable any likely adverse impacts. Details are provided within the **Outline CEMP** (Volume 6 Document Ref 6.4 ES Appendix 16.1).

Allocated/future development land during operation

- 12.13.61 The scheme once operational would bring accessibility benefits to the majority of developments by virtue of improved transport conditions.
- 12.13.62 Those that would experience reduced accessibility are situated off the Chiverton roundabout, which would experience an increased journey length of around 1km for vehicles exiting the A30. However, the benefits to journey times and journey time reliability by virtue of the improved travel conditions overall would likely offset this impact.
- 12.13.63 In general, taking into account the location of the developments and scale of impact, the magnitude of change is likely to be mixed. As such, there are expected to be slight beneficial impacts overall as a result during operation, with no likely significant effects on future development land. The likely effects are presented in Table 12-22.

Table 12-22 Assessment of Development Land

Receptor	Approximate Proximity	Sensitivity	Magnitude	Significance (construction)	Significance (operation)
PA15/06100 Roadside hotel and restaurant, Chiverton	0.1km	Medium	Minor	Slight adverse	Slight beneficial
PA16/08707 Extension to office space, Trevissome Park	0.2km	Low	Minor	Slight adverse	Slight beneficial
PA15/02972 1.5 Mw wind turbine, East of B3285/A30	0.1km	Low	No change	Neutral	Neutral
PA14/07885 24 residential units, Blackwater	1.6km	Low	Negligible	Slight adverse	Slight beneficial
PA14/08092 Mixed use, Penstraze	1.6km	Medium	Negligible	Slight adverse	Slight beneficial
PA15/11489 494 dwellings, Threemilestone	2km	Medium	Negligible	Slight adverse	Slight beneficial

Other land

Other land during construction

- 12.13.64 When considering other land that is affected by the proposed scheme, the assessment focusses on an area of open space land which lies immediately adjacent and to the south of the A30 approximately 250m west of Carland Cross junction. The area is not currently publicly accessible and not used for recreational purposes. As such it is considered to have a low sensitivity.
- 12.13.65 A small section of the site will be directly impacted with the proposed scheme alignment running through the land. The magnitude of change would be minor given the scale of the impact and overall the effect would be slight adverse.

Other land during operation

- 12.13.66 In seeking to mitigate the loss of open space land, the proposed scheme has identified replacement land to the east, near to the new Carland Cross junction. The area of land identified contains an historic barrow which will be retained and will provide an area of heathland which is accessible for recreational/public use (see **Special Category Land Plan**, Volume 2, Document Reference 2.3). A new WCH route via an underbridge will run through the site, adding to its accessibility.
- 12.13.67 The magnitude of change would be minor. As such it is considered that the scheme would have an overall slight beneficial impact on open space land with no net loss and improved access to the re-provided area.

12.14 Monitoring

- 12.14.1 Beyond the recommendations for monitoring made in other relevant assessments including **Landscape** (Volume 6 Document Ref 6.2 ES Chapter 7), **Noise and vibration** (Volume 6 Document Ref 6.2 ES Chapter 11) and **Air quality** (Volume 6 Document Ref 6.2 ES Chapter 5), there are no significant adverse effects related to this assessment identified either during construction or operational stages of the scheme that require monitoring.

12.15 Summary

- 12.15.1 This assessment has considered:

- **All Travellers** – including potential effects on vehicle travellers, walkers, cyclists and horse-riders;
- **Communities** – including potential effects on employment, existing settlements, access to services/green space, community safety, health⁴⁰, and residential amenity; and
- **Land and Property** – including potential effects on land and property to be used or acquired, allocated land, tourism and recreation receptors and commercial business receptors.

⁴⁰ A full assessment of health has been undertaken with a **Health impact assessment** (Volume 6 Document Ref 6.4 ES Appendix 12.1).

- 12.15.2 It is considered that the scheme complements the relevant legislative and policy framework by supporting economic development through improved access to jobs and services and improved journey time reliability.
- 12.15.3 Mitigation for likely adverse effects has been identified where necessary and as appropriate, for both temporary/short-term construction activities and the long-term operation of the scheme.
- 12.15.4 Table 12-23 summarises the overall assessment of significance of identified effects for the topics discussed in this section. This takes into account effects both during construction and operation of the scheme.

Table 12-23 Summary of significance of effect during construction and operation

Topic	Receptor	Significance of effect during construction	Significance of effect during operation
All Travellers	Views from road	Neutral	Neutral
	Driver stress	Low adverse	Moderate beneficial
	Bus travellers	Slight adverse	Slight beneficial
	WCH	Slight adverse	Slight beneficial
	Amenity	Slight adverse	Neutral
Communities	Settlements and access to open space and services	Slight adverse	Slight beneficial
	Employment	Slight beneficial	Slight beneficial
	Community safety	Slight adverse	Slight beneficial
	Health	Slight adverse	Slight beneficial
	Amenity	Slight adverse	Slight adverse
Land and Property	Commercial property/businesses	Slight adverse	Slight beneficial
	Agricultural land and farm holdings/plots	Moderate adverse	Moderate adverse
	Tourism and Recreation	Slight adverse	Slight beneficial
	Allocated/Future Development land	Slight adverse	Slight beneficial
	Other land uses	Neutral	Neutral

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