AECOM

Strategic Environmental Assessment (SEA) for the Peninsula Transport Strategic Implementation Plan 2024-2050

SEA Environmental Report

Peninsula Transport Sub-national Transport Body

February 2025

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
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Revision	Revision date	Details	Authorized	Name	Position
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Non-Technical Summary

What is Strategic Environmental Assessment?

A Strategic Environmental Assessment (SEA) has been carried out to inform the development of the Peninsula Transport Strategic Implementation Plan 2024-50 (hereafter referred to as "the SIP") on behalf of Peninsula Transport Sub-national Transport Body.

Transport authorities such as Peninsula Transport use SEA to assess transport plans such as the SIP against a set of environmental objectives developed in consultation with interested parties. The purpose of the assessment is to avoid adverse environmental and socio-economic effects, and identify opportunities to improve the environmental quality of the South West Peninsula and the quality of life of residents through the SIP.

What is the Peninsula Transport Strategic Implementation Plan 2024-50 (the SIP)?

In December 2023 Peninsula Transport published the Peninsula Transport Strategy, which covers Cornwall, Plymouth, Torbay, Devon and Somerset. The Peninsula Transport Strategy set out a long-term transport strategy which seeks to respond to the unique challenges across the region and provides a framework for creating a single integrated transport system for the peninsula. The 30-year strategy is designed to give the south west of England a resilient, reliable and accessible transport system, boost economic growth while supporting more sustainable ways to travel.

The SIP will implement the Peninsula Transport Strategy. Peninsula Transport has drawn together current investment plans for strategic transport across the region and developed an analytical approach to prioritising major transport projects or schemes linked to the four outcomes in this strategy. It is not the role of Peninsula Transport to deliver individual projects. Instead the STB will manage the prioritised list, use this to advise government and facilitate the delivery of these schemes through supporting our member local authorities and strategic partners.

The SIP will:

- Direct how strategic transport investment is allocated
- Support the STB's partners and ensure investment is channelled effectively to preserve and maintain the safety, reliability and resilience of our existing transport networks
- Provide support for strategic road and rail schemes in the region
- Set out Peninsula Transport's support for local authorities' sustainable transport and Net Zero goals
- Highlight the full extent of resilience works required on the rail network
- Feed into the work of National Highways and the Department for Transport through their third Roads Investment Strategy process.

The draft SIP is undergoing consultation between February 2025 and March 2025

Purpose and content of this Environmental Report

This Environmental Report, which accompanies the public consultation version of the SIP, is the second document to be produced as part of the SEA process. The first document was the SEA Scoping Report, which includes information about the south west's environment and communities and the 'framework' against which the SIP has been assessed.

The purpose of this Environmental Report is to:

- Identify, describe and evaluate the likely significant environmental effects of the SIP and alternatives; and
- Provide an opportunity for statutory consultees, interested parties and the public to offer views on the SEA process carried out to date.

The Environmental Report contains

- An outline of the contents and main objectives of the SIP and its relationship with other relevant policies, plans and programmes;
- Relevant aspects of the current state of the environment and key environmental issues;
- The SEA Framework of objectives and assessment questions against which the SIP has been assessed;
- an assessment of alternative approaches for the SIP;
- The likely environmental effects of the SIP;
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects as a result of the SIP; and
- The next steps for the SIP and accompanying SEA process.

Assessment of alternative approaches for the SIP

A requirement of the SEA Regulations is to assess 'reasonable alternatives' for the SIP.

The SIP sits within the framework of the overarching strategy document, the Peninsula Transport Strategy. As such, the overarching strategy leading the SIP has already been determined through the adopted strategy.

For this reason, there are no appropriate reasonable alternatives to be considered relating to the overall strategy within which the SIP sits. Instead, the key decisions to be made relating to the SIP regard the schemes and projects which can potentially be implemented through the plan.

To support the development of the SIP, Peninsula Transport has considered a range of schemes for delivery during the up to 30-year plan period. During the first stage of this process Peninsula Transport considered a 'long list' of 109 potential transport schemes.

These were considered through a three-phase process, including: a consideration of whether the proposed scheme is strategic in scale and is appropriate for the SIP; consideration through a Multi Criteria Assessment Framework which assessed a scheme's impact in addressing the STB's four Transport Strategy outcomes and the five agreed STB Vision Goals (see Figure 1.2 and Figure 1.3 in main body of this Environmental Report); and a Deliverability Assessment to ensure that proposed investments will provide value for money and are deliverable.

The purpose of the SIP is not to have a long list of ranked schemes as it is impossible to compare strategic transport schemes that use different modes to achieve different objectives. The SIP is also intended to act as a 'live document' that can be regularly

reviewed and updated, and used to respond to specific calls for schemes, such as from the Government. In this respect Peninsula Transport will be able to use the SIP to respond to specific requests for thematic investment funds, for example rail resilience investment funds or electric vehicle/zero emission public transport funding opportunities or other such ring-fenced specific funds. The scheme lists may also be amended based on changes in available information on e.g. scheme costs, change in strategic case for change, future national policy changes or other change that impacts the case for a scheme.

In this context the SIP will therefore be a 'living plan' that will regularly be reviewed throughout the plan period as further studies are undertaken and as more detail on proposed schemes become available. This will include updates to the list of schemes; additional clarity and detail on the scheme proposals; updates to delivery timescales; and updates to scheme funding sources. At this stage therefore, the 67 schemes currently presented in the SIP are in effect the 'reasonable alternatives' for the plan.

Assessment of the schemes presented in the current consultation version of the SIP

The assessment has considered the likely environmental effects of 70 schemes currently presented in the consultation version of the SIP. Findings have been presented through the seven environmental themes developed during scoping, i.e.:

- Biodiversity
- Water and soil resources
- Historic environment
- Landscape
- Air quality and noise
- Climate change and flood risk
- Healthy communities

Under each of the above environmental themes, assessment findings have been discussed for each potential scheme. In response to the assessment findings, potential mitigation measures have also been proposed, and opportunities identified. This is with a view to informing the ongoing development of the schemes to implementation.

A summary of the assessment findings is presented below. Detailed assessment findings, including commentaries, are presented in **Chapter 4** and **Appendix B** of this Environmental Report.

Table NTS1: Summary of assessment findings, Tier One: Region Wide schemes

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities
Rail network Decarbonisation							
Peninsula Rail Card							
North Devon Line							
South West Rail Resilience Programme Phase 5							
Devon Metro - West of England Line							
Better Buses for Peninsula							
Plymouth Metro							
West Cornwall Rail Connectivity Upgrade							
Devon Metro - Tavistock to Plymouth							
South West Mobile Connectivity							
BSIP Schemes							
Bus Decarbonisation							
Demand Responsive Transport (DDRT)							
Active travel Investment							
Station access enhancements across all rail stations							

Table NTS2: Summary of assessment findings, Tier Two: Strategic Schemes (Short term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities
Reopen Wellington and Cullompton Stations							
Edginswell Station							
Taunton to Bishops Lydeard							
A38 Deep Lane Park and Ride							
A30 Kennards House – 5 Lanes (Plusha)							
A38 Trerulefoot to Carkeel Safety Measures							
Coach links to Exeter and Bristol							

Table NTS3: Summary of assessment findings, Tier Two: Strategic Schemes (Medium term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities
Yeovil Junction							
Gravity freight facility							
Additional long distance calls at Bridgwater							
Exeter St Davids – Dawlish signalling headways							
Strategic Rail Freight terminal – Mid Cornwall							
Strategic Rail Freight Interchange at Exeter Riverside Yard							
West of Plymouth P&R							
Tamar Bridge Capacity Management Options							
A358 Improvements package							
Torpoint Ferries capacity improvements							
A38 Deep Lane Junction and Public transport							
A37, A361 A39 Connectivity and safety package							
Paignton branch capacity improvements							
A38 St Budeaux Interchange							
Transport Strategy and multi modal package for Gravity Site, Somerset							
A30 Kennard House to Fivelanes (Plusha)							
A38 Weston Mill Junction							
A38 Case for Action - Bodmin to Exeter							
Cattedown Roundabout							
A38 Trerulefoot to Carkeel Safety Package							
A38 Liskeard to Trerulefoot							
A374 Western Approach to Millbay							
Watchet Coastal Erosion Package							

Table NTS4: Summary of assessment findings, Tier Two: Strategic Schemes (Long term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities
New Station at Langport and Somerton on Castle Cary - Taunton Line							
Heart of Wessex Line Improvement							
Goodrington Extension and proposed new station and park and ride							
Bideford to Barnstaple rail extension							
Tavistock Junction (Yard)							
A30 / A303 Blackdown							
A361 Resilience Package							
A30 Camborne to Penzance							
J29-31 – M5 Exeter Gateway							
A303 South Petherton to Southfields – RIS Pipeline Scheme							
Sandy Road / Holland Road junction							

Key:

Likely adverse effects (without mitigation measures)	
Likely positive effect	
Neutral/no effect	
Uncertain effects	

Next steps

This Environmental Report has been published to accompany the draft SIP and released alongside the plan for consultation. Following the consultation period, comments will be reviewed and analysed. The final SIP will then be developed, with a view to adoption later in 2025. Any changes arising to the SIP will be assessed where they alter the assessment findings presented in this report.

An SEA Adoption Statement will then be published to accompany the adopted SIP and will present:

- The reasons for choosing the preferred measures for the SIP as adopted in the light of other reasonable alternatives dealt with;
- How environmental considerations have been integrated into the SIP;
- How consultation responses have been taken into account; and
- Measures that are to be taken to monitor the significant environmental effects of the SIP.

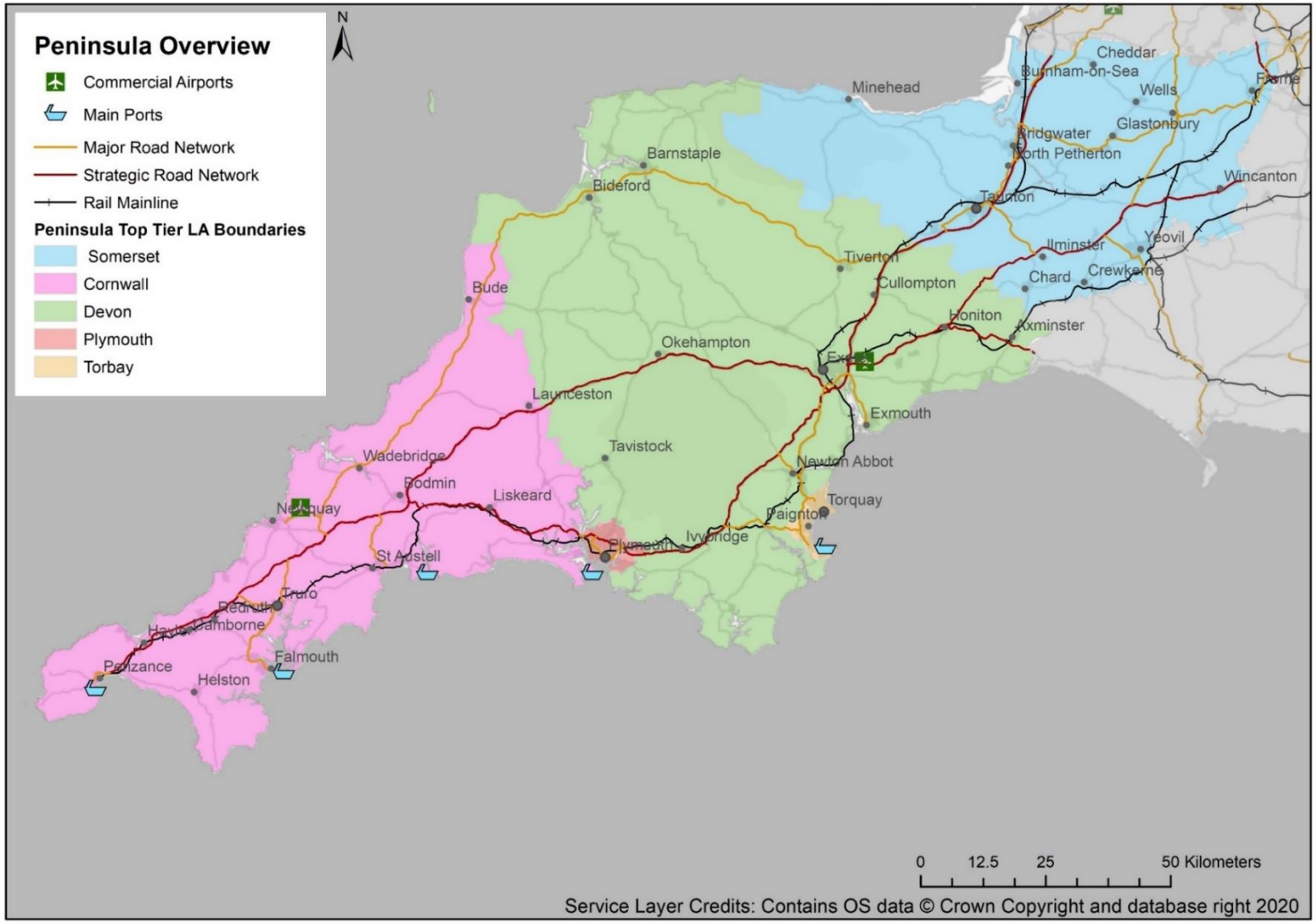


Figure 0.1: Peninsula Strategic Implementation Plan area

1. Introduction

1.1. Background

1.1.1. AECOM has been commissioned to undertake an independent Strategic Environmental Assessment (SEA) in support of the emerging Peninsula Transport Strategic Implementation Plan 2024-50 (hereafter referred to as "the SIP") on behalf of Peninsula Transport Sub-national Transport Body.

1.1.2. This document is the SEA Environmental Report which accompanies the SIP for consultation.

1.2. The Peninsula Transport SIP

Peninsula Transport Sub-national Transport Body

1.2.1. Peninsula Transport is the Sub-national Transport Body (STB) for the south west peninsula. Peninsula Transport STB is a non-statutory body, representing five Local Authorities in the region, Cornwall, Devon, Plymouth, Somerset and Torbay (see **Figure 1.1**) and working with strategic transport partners at Network Rail and National Highways and other key stakeholders such as train operating companies, ports and airports. The purpose of STBs is to develop and provide strategic, long-term transport priorities for their regions, whilst working in partnership with others. Peninsula STB is funded through a combination of local contributions and contributions for specific work packages from the Department for Transport.

1.2.2. The Vision of the STB is as follows: "*Transforming transport across the peninsula to enable our society and economy to thrive and our unique and outstanding environment to flourish*." The Vision Goals are set out below:

Figure 1.1: Peninsula Transport STB Vision Goals

The Peninsula Transport Strategy

1.2.3. In December 2023 the STB published the Peninsula Transport Strategy.[1] The Peninsula Transport Strategy set out a long-term transport strategy which seeks to respond to the unique challenges across the region and provides a framework for creating a single integrated transport system for the peninsula. The 30-year strategy is designed to give the south west a resilient, reliable and accessible transport system, boost economic growth while supporting more sustainable ways to travel.

1.2.4. The key facets of the Peninsula Transport Strategy are set out in **Figure 1.2**.

[1] Peninsula Transport (2023) Peninsula Transport Strategy: Strategic Transport Priorities to 2050 www.peninsulatransport.org.uk/wp-content/uploads/2023/12/Peninsula-Transport-Strategy-07-12-23-pr2.pdf

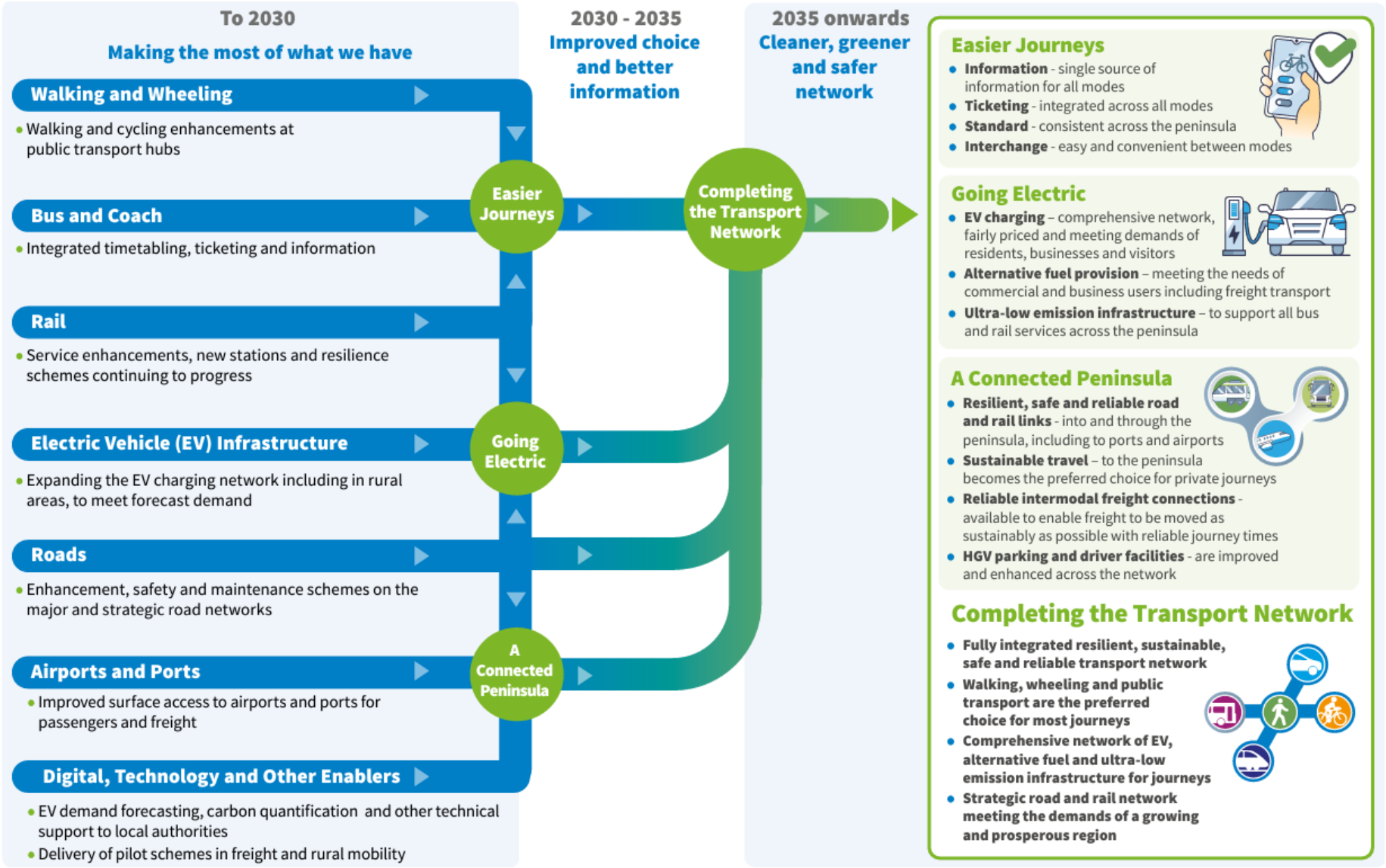


Figure 1.2: Summary of the Peninsula Transport Strategy

Strategic Implementation Plan

1.2.5. The Strategic Implementation Plan (SIP) is currently being developed to support the implementation of the Peninsula Transport Strategy. The purpose of the SIP will be to bring together all the transport priorities across the peninsula into one plan that responds to the unique characteristics of the region.

1.2.6. Peninsula Transport has drawn together current investment plans for strategic transport across the region and developed an analytical approach to prioritising major transport projects or schemes linked to the four outcomes in this strategy. It is not the role of Peninsula Transport to deliver individual projects. Instead, the STB will manage the prioritised list, use this to advise government and facilitate the delivery of these schemes through supporting our member local authorities and strategic partners.

1.2.7. The SIP will:

- Direct how strategic transport investment is allocated
- Support the STB's partners and ensure investment is channelled effectively to preserve and maintain the safety, reliability and resilience of our existing transport networks
- Provide support for strategic road and rail schemes in the region
- Set out Peninsula Transport's support for local authorities' sustainable transport and Net Zero goals
- Highlight the full extent of resilience works required on the rail network
- Feed into the work of National Highways and the Department for Transport through their third Roads Investment Strategy process

1.2.8. The draft SIP is undergoing consultation between February and March 2025.

1.3. SEA explained

Overview of SEA

1.3.1. Strategic Environmental Assessment (SEA) is a mechanism for considering and communicating the environmental impacts of an emerging plan and potential alternatives. An SEA is required for some transport plans in accordance with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations).

1.3.2. The aim of the SEA for the SIP is to inform plan-making both directly (i.e. through structured, systematic and evidence-based analysis), and indirectly (through providing stakeholders with information on potential plan impacts and so facilitating effective consultation). Through this approach, the SEA seeks to support the environmental performance of the SIP.

1.3.3. SEA is undertaken to address the procedures prescribed by the SEA Regulations. Two key procedural requirements of the SEA Regulations are that:

1) When deciding on 'the scope and level of detail of the information' which must be included in the Environmental Report there is a consultation with nationally designated authorities concerned with environmental issues; and
2) A report (the 'Environmental Report') is published for consultation alongside the draft plan for consultation that presents an assessment of the draft plan (i.e.

discusses 'likely significant effects' that would result from plan implementation) and reasonable alternatives.

1.3.4. This Environmental Report comprises 2) above. A more detailed overview of the SEA process undertaken for the is set out below.

Key stages of the SEA process

1.3.5. The SEA undertaken for the SIP follows the process required by the SEA Regulations. There is guidance published by government on undertaking SEA, specifically 'A Practical Guide to the Strategic Environmental Assessment Directive'; the 'Practical Guide'. This sets out a five-stage process for undertaking SEA. This process, in conjunction with the SEA Regulations, guides this assessment.

1.3.6. The stages and outputs for the SEA are shown in **Figure 1.4** below.

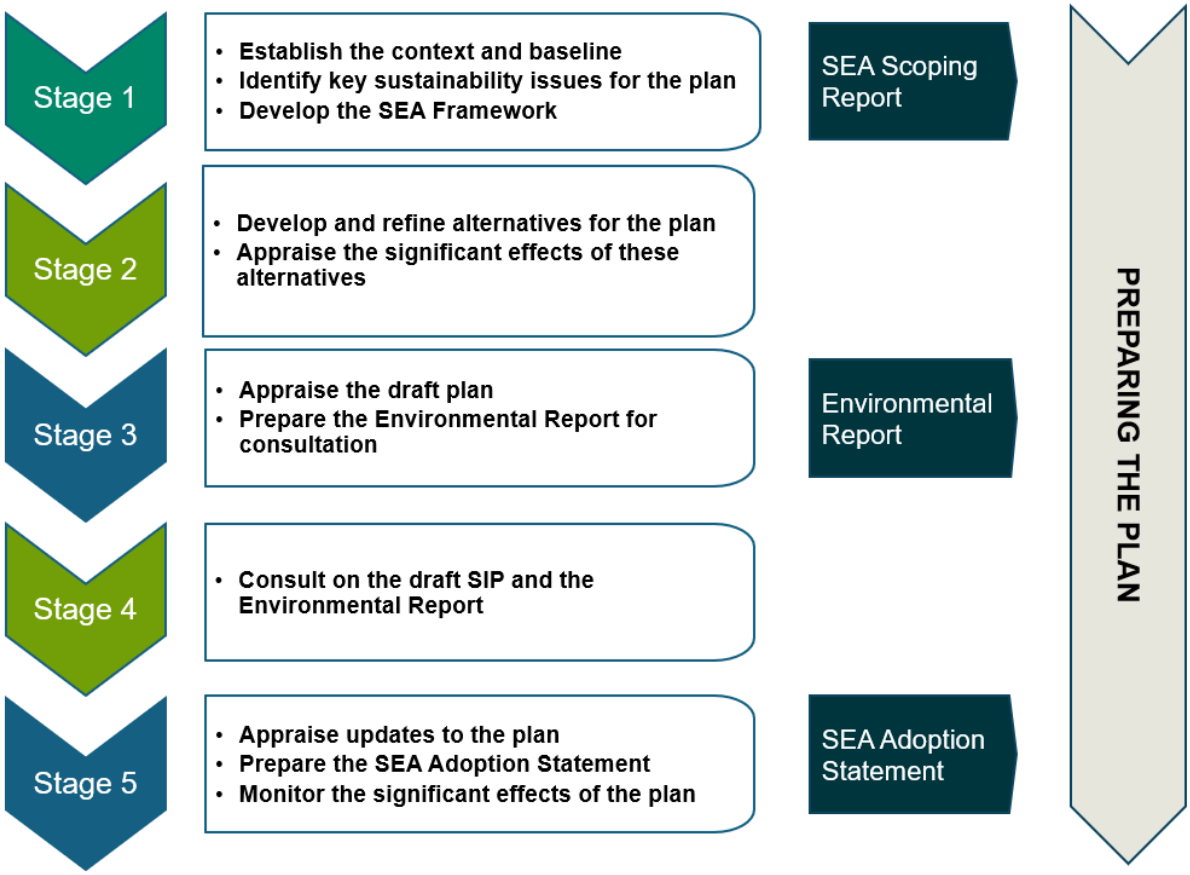


Figure 1.4: Key stages of the SEA process

This Environmental Report

1.3.7. In line with the SEA Regulations, a report (known as the Environmental Report) must be published for consultation alongside the draft plan that "*identifies, describes and evaluates*" the likely significant effects of implementing "*the plan, and reasonable alternatives*". The report must then be considered, alongside consultation responses, when finalising the plan.

1.3.8. More specifically, the Environmental Report must answer the following questions[2]:

1) What is the scope of the SEA?

[2] Regulation 12(2) of the Environmental Assessment of Plans and Programmes Regulations 2004.

2) What has plan-making / SEA involved up to this point?
   - Including in relation to 'reasonable alternatives'.
3) What are the SEA findings at this current stage?
   - I.e., in relation to the draft SIP
4) What happens next?
   - What are the next steps for plan-making and SEA?

1.3.9. These questions are derived from Schedule 2 of the SEA Regulations, which present 'the information to be provided within the report'. Table 1.1 below presents the linkages between the regulatory requirements and the four SEA questions.

Table 1.1: Questions that must be answered by the Environmental Report in order to meet regulatory requirements

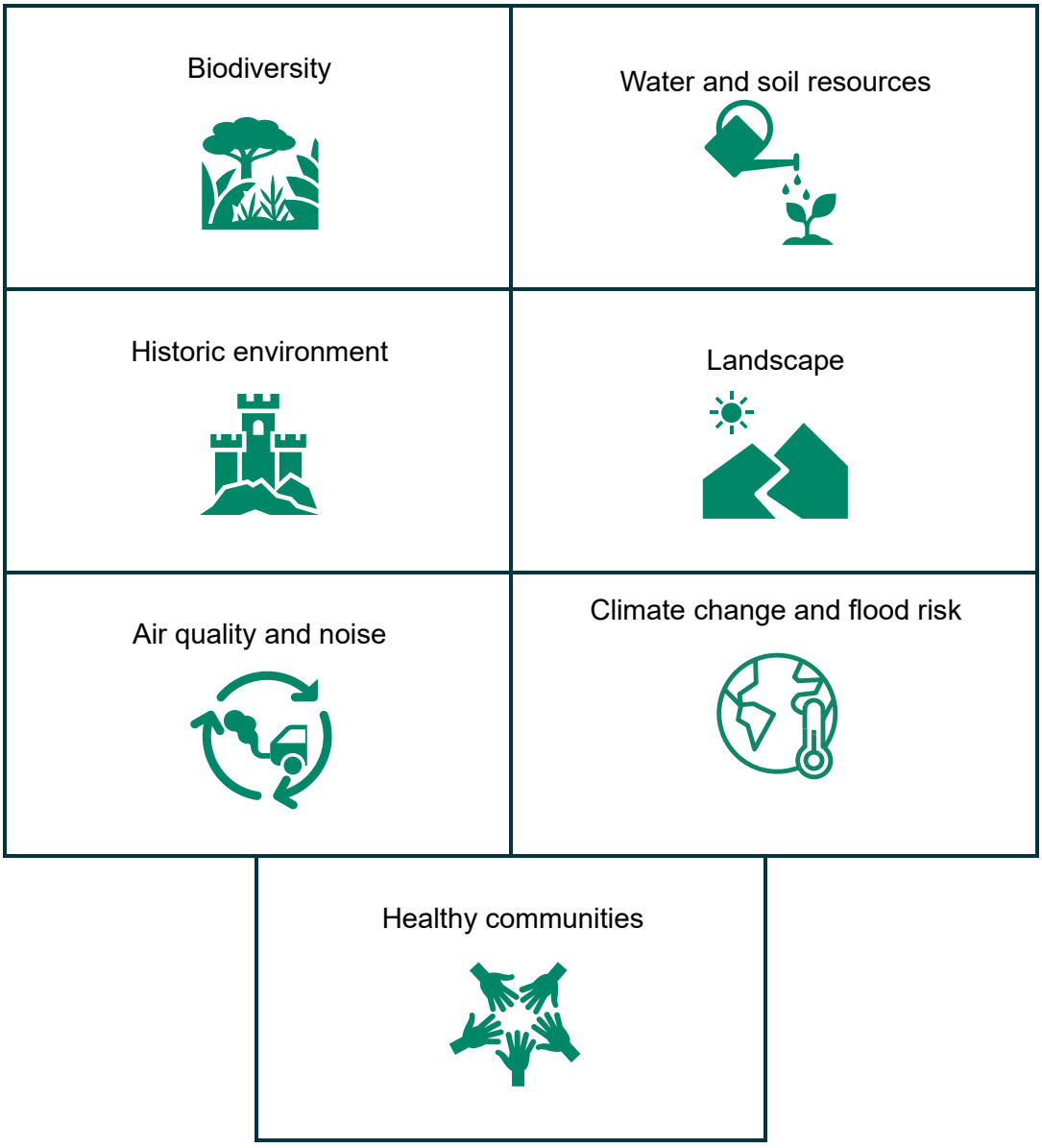
Environmental Report question		In line with Schedule II the report must include…
What is the scope of the SEA?	What is the plan seeking to achieve?	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes.
	What is the sustainability 'context' and baseline?	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan. The environmental characteristics of areas likely to be significantly affected. Any existing environmental **problems** which are relevant to the plan including those relating to any areas of a particular environmental importance.
	What are the key issues and objectives that should be a focus?	Key **problems / issues** and **objectives** that should be a focus of (i.e. provide a 'framework' for) assessment.
What has plan-making / SEA involved up to this point?		Outline reasons for selecting the **alternatives** dealt with (and thus an explanation of the 'reasonableness' of the approach). The likely significant effects associated with **alternatives**. Outline reasons for selecting the preferred approach in-light of alternatives assessment / a description of how environmental objectives and considerations are reflected in the **draft plan**.
What are the assessment findings at this current stage?		The likely significant effects associated with the **draft plan**. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the **draft plan**.
What happens next?		The next steps for plan making / SEA process.

2. What is the scope of the SEA?

2.1. SEA Scoping Report

2.1.1. The SEA Regulations require that 'When deciding on the scope and level of detail of the information that must be included in the Environmental Report, the responsible authority shall consult the consultation bodies'. In England, the consultation bodies are Natural England, the Environment Agency and Historic England.[3] As such, these authorities were consulted on an SEA Scoping Report in September 2021. In addition the two National Park Authorities and the nine AONBs (now National Landscapes) in the region were consulted.

2.1.2. The SEA Scoping Report presented information for the following seven environmental themes:



[3] In line with Article 6(3) of the SEA Directive, these consultation bodies were selected because "*by reason of their specific environmental responsibilities,[they] are likely to be concerned by the environmental effects of implementing plans and programme*".

2.1.3. These SEA themes incorporate the 'SEA topics' suggested by Annex I(f) of the SEA Directive and reflect the purpose of the SIP and its potential environmental effects.

2.1.4. Comments received from the consultees on the Scoping Report, and how they have been considered and addressed through the ongoing development of the SEA process, are presented in **Appendix A**.

2.2. Content of SEA Scoping Report

2.2.1. Reflecting the requirements of the SEA Regulations, the following information was presented in the Scoping Report for the seven SEA themes:

- **Context review:** This explored the environmental and sustainability 'context' for the SEA/SIP through reviewing high level messages (e.g. internationally, from central government and at the regional level) with a view to establishing the focus for the SEA.
- **Baseline data:** This established the baseline situation in the area in the absence of the STP/SIP (including the future baseline) in order to help identify the plan's likely significant effects.
- **Key issues:** This identified particular problems or opportunities ('issues') that should be a focus of the SEA.

2.2.2. Drawing on the key issues established through the above process, the Scoping Report presented an SEA Framework of objectives and assessment questions which would be used to assess the draft plan and alternatives. A summary of the key issues and the full SEA Framework is presented below. The baseline information, which has been updated to reflect comments received on the Scoping Report consultation, is presented in **Appendix B**.

2.3. Key issues for the SEA

2.3.1. The SEA Scoping Report identified a range of sustainability problems / issues that provide the focus of the SEA process. Presented under each of the SEA themes, this drew on the review of the sustainability context and baseline.

2.3.2. The key issues identified through scoping are presented below under each SEA theme.

Biodiversity

- There are 53 International and/or European designated sites located wholly or partly within the Peninsula region, including three Ramsar sites, seven SPAs and 43 SACs;
- Natural England is a statutory consultee on development proposals that might impact on SSSIs. There are 464 SSSIs located wholly or partly within the Peninsula region.
- Many areas of the Peninsula region overlap with one or more SSSI IRZs for the types of development likely to come forward through the Peninsula Transport Strategy.
- There are 25 NNRs and 83 LNRs located wholly or partly within the Peninsula region.
- Since 2013, the UK Government has designated over fifty MCZs, including 20 located wholly or partly within the Peninsula region.

- Additional local designations within the Peninsula region include LWS, SNCI, CWS, LGS and RIGS. The availability of information regarding these designations varies between local authority area, and it has not been possible to obtain all the relevant GIS layers at this stage of the IIA process.
- There are a variety of BAP Priority Habitats located within or within proximity to the Peninsula region, primarily areas of deciduous woodland, ancient semi-natural woodland, coastal and floodplain grazing marsh, upland heathland, lowland heathland, grass moorland, blanket bog, and coastal sand dunes.
- Environmental Records Centres for each local authority area contain records of protected or notable species within the Peninsula region. This includes records of several species of birds, mammals, bats, insects, grasses, trees, amphibians and reptiles.
- The nature, scale, timing and duration of some transport activities can result in the disturbance of species at a level that may substantially affect their behaviour, and consequently affect the long-term viability of their populations. This can include effects of poor air quality on designated sites, severance of ecological networks from transport corridors, and road kills.

Water and soil resources

- The water resources located within and within proximity to the Peninsula region include a network of main rivers, small streams and brooks, along with several drainage ditches and small pools located within and adjacent to field margins.
- Main rivers include (but are not limited to) the Tamar, Exe, Fal, Camel, Taw, Parrett, Teign, Dart, Avon, Erme, Yealm, Lynher, Fowey, Axe, and Yeo.
- The three sectors which have the biggest proportion of RNAGs attributed to them are the agricultural and land management sector, water industry sector, and the mining and quarrying sector.
- The key issues preventing waterbodies from reaching good status are as follows: pollution from rural areas; pollution from abandoned mines; pollution from wastewater; physical modifications; changes to the natural flow and levels of water; and pollution from towns, cities and transport. Poor management of surface water run-off from the road network is a key contributor to poor water quality in some locations.
- Undeveloped areas of the Peninsula are predominantly underlain by areas of Grade I, Grade 2 and Grade 3 agricultural land. The region therefore has the potential to contain some of the best and most versatile land for agricultural purposes.
- In the absence of a detailed ALC assessment it is currently not possible to determine whether the Grade 3 areas can be classified as Grade 3a (i.e. best and most versatile land) or Grade 3b land.
- The results of the ‘Predictive BMV Land Assessment’ for South West England provided by Natural England indicates that several undeveloped areas of land in the Peninsula region have a moderate or high likelihood of containing BMV land.

Historic environment

- There are two World Heritage Sites within the region: the ‘Cornwall and West Devon Mining Landscape’ and the ‘Jurassic Coast’. The Outstanding Universal Value of the sites reflects both their integrity and authenticity.

- According to the National Heritage List for England, the Peninsula region contains 957 Grade I listed buildings, 2,613 Grade II* listed buildings and 41,606 Grade II listed buildings.
- There are 3,748 scheduled monuments within the Peninsula region, as follows: Cornwall (1,348), Plymouth (34), Devon (1,742), Torbay (13), Somerset (611).
- There are 133 registered parks and gardens and six registered battlefields present in the Peninsula region.
- There are 717 conservation areas across the Peninsula region, including 145 in Cornwall, 15 in Plymouth, 326 in Devon, 24 in Torbay, and 207 in Somerset.
- There are nine Protected Wrecks within the Peninsula region, including: Rill Cove, Schiedam, Church Rocks, Cattewater, Royal Anne, Coronation Inshore, Erme Estuary, Hanover, and Low Bar Wreck.
- The HER for each local authority area identify the important distinctive structures or features that positively contribute to the local distinctiveness and sense of place of the Peninsula region.
- According to the 2020 Heritage at Risk Register for South West England, there are 805 heritage assets at risk across the Peninsula region.
- It is currently not possible to determine whether any of the Grade II listed buildings within the Peninsula region are at risk.
- The need to conserve the significance of designated and non-designated heritage assets, including their settings, by avoiding, minimising and mitigating negative impacts to this irreplaceable resource and to maximise their enhancement, understanding and enjoyment for the benefit of existing and future generations.

Landscape

- Approximately a quarter of the Peninsula region is designated as National Park (two in total), AONB (nine in total) or as a Heritage Coast area (17 in total).
- There are 23 NCAs located wholly or partly within the Peninsula region, with the NCA profiles detailing statements of environmental opportunity for their conservation and enhancement.
- The results of the local landscape character assessments identified 40 LCAs within Cornwall and 37 LCTs across Devon, Plymouth and Torbay.
- It is currently not possible to access a comprehensive GIS mapping layer showing the local landscape character areas and types across the whole of Somerset.
- The local authorities within the Peninsula region have designated a significant number of TPOs in the interest of their amenity value, including many within and adjacent to built-up areas.
- Views across the region are also an important consideration in the planning process as the scale, height and mass of development can ultimately impact important views if they are not considered and assessed through the process.
- Important areas for experiencing dark skies and tranquillity within the Peninsula region include Dartmoor National Park, Exmoor National Park and Bodmin Moor.

Air quality and noise

- AQMAs within the Peninsula region have been primarily designated for exceedances in the annual mean concentration objective of 40µg/m3 for nitrogen dioxide (NO2).
- In total, 13 of the 20 MRN corridors within the Peninsula pass through an AQMA.
- Areas of noise concern within the Peninsula region broadly link to and follow the routes of the road network.
- A number of protected sites are vulnerable to poor air quality. Whilst it is important to manage air quality to protect human health it is also important to manage air quality to protect habitats and species.

Climate change and flood risk

- All five of the unitary and county authorities represented within the Peninsula region declared Climate Emergencies in 2019 and are developing policies and action plans to accelerate the reduction of carbon emissions in their areas.
- Road transport modes are the biggest overall emitters within the Peninsula region, with 69% of total transport emissions in 2016. Cars and LGVs were responsible for 54%, HGVs 12% and buses and coaches just 2%.
- The widely reported reduction in transport carbon emissions resulting from COVID-19 travel restrictions will be important additional context for understanding what scale of reductions are achievable for any given intervention as part of the Peninsula Strategy.
- Resilience of the transport networks across the Peninsula region is critical, with the region's road and rail networks being particularly vulnerable to the impacts of coastal and inland flooding and the associated impacts of climate change.
- Many of the Peninsula's major transport corridors also lack a reasonable alternative, meaning that the impact of incidents, maintenance or weather events are severe and cause a huge amount of disruption to travel.
- In terms of flood risk zones, the level of potential flooding is noticeably high across the Somerset levels, and for areas of land surrounding major rivers such as the River Exe (Exeter), River Taw (Near Barnstaple) and the River Teign (Newton Abbot).
- Harsh weather conditions cause issues on routes such as the A30 given the high road altitude across Bodmin Moor, the A303, and on the A380 Telegraph Hill and A38 Haldon Hill south of Exeter.

Healthy communities

- Population growth continues to be high in the region. In the past 50 years, the population has grown at an average rate of nearly 8% per decade.
- There are plans for nearly 200,000 new dwellings and more than 170,000 new jobs across the Peninsula Transport area in the period to 2040.
- The necessity for a large proportion of the population to work remotely during the COVID-19 epidemic has the potential to drive a considerable acceleration in the (already upwards) trend in flexible working practices. For the Peninsula, this could mean higher levels of inward migration from other regions in the UK.
- There are three urban areas with a population exceeding 100,000: Exeter, Plymouth and Torbay. There are also a large number of small and medium-sized

towns (including coastal communities) making an important contribution to economic activity of the region.

- A large proportion of economic activity in the Peninsula is located along the main transport corridors of which the routes along the Peninsula east-west spine are the most critical. This spine runs west through Somerset to Exeter (via the M5) and then on to Plymouth (via the A38) and into Cornwall (via the A38 and the A30).
- The South West is the most visited region in the UK with approximately 21 million domestic visitors in 2017 contributing £4.5 billion to the UK economy. Annually, around 1.35 billion trips are made within the Peninsula, of which the vast majority are by car.
- With an extensive coastline, the maritime industry is an important sector in the Peninsula economy providing more than 15,000 full-time equivalent jobs and contributing close to £3 billion of GVA to the UK.
- The most important current function of the Peninsula airports at Exeter and Newquay is domestic passenger flights providing lower journey times than the rail and road alternatives to locations outside of the region.
- There is an existing network of green infrastructure in the Peninsula, including long distance walking and cycling routes such as the South West Coastal Path.
- Based on the 2019 IMD, there are several areas of deprivation across the Peninsula region.

2.4. SEA Framework

2.4.1. The key issues were then translated into an SEA Framework of objectives and assessment questions. The SEA Framework has been used to inform the assessment of likely significant effects on the baseline, as presented in Chapters 3 and 4 below. This enables the sustainability effects of the SIP and alternatives to be defined and subsequently analysed based on a structured and consistent approach.

2.4.2. **Table 2.2** below presents the objectives and assessment questions for each SEA theme.

Table 2.1: SEA Framework for the SIP

SEA theme	Objectives	Assessment questions – will the option/proposal help to:
Biodiversity	Support the integrity of designated sites	• Protect the integrity of the internationally designated Ramsar sites, SACs and SPAs in the Peninsula? • Avoid negative impacts, and where possible improve the condition of SSSIs within the Peninsula? • Manage pressures on locally designated sites for biodiversity and geodiversity in the Peninsula? • Maintain, and where possible, enhance the status of NNRs and LNRs in the Peninsula and people's access to these?

SEA theme	Objectives	Assessment questions – will the option/proposal help to:
	Protect, enhance and restore habitats and species	• Protect, enhance and restore semi-natural habitats? • Protect, enhance and restore priority habitats, and the habitat of priority species? • Achieve a net gain in biodiversity? • Increase the resilience of the Peninsula's biodiversity to the potential effects of climate change? • Reduce the impact of the transport network on species' severance?
	Increase habitat connectivity across the transport network	• Contribute to the creation of coherent and resilient ecological networks? (i.e. allow passage of wildlife across roads, railway lines, cycle paths through the use of animal bridges/tunnels or support green infrastructure enhancements)? • Avoid the compromise of the existing ecological network, and ensure opportunities for the future enhancement of habitat connectivity are not prejudiced.
Water and Soil Resources	Minimise the impact which transport, and transport infrastructure has on water quality, associated biodiversity, and on the physical state of water bodies.	• Support improvements to water quality, including through minimising the impacts of diffuse run off from road surfaces? • Protect surface water and groundwater resources? • Minimise physical alterations to water bodies? • Minimise the impacts to, and where possible enhance the quality of water bodies of strategic significance for water supply?
	Promote the efficient use of land.	• Facilitate the use of previously developed land? • Avoid the loss of the best and most versatile agricultural land (Grade 1 to 3a agricultural land)? • Protect and enhance soils, including from the impacts of climate change.
	Promote sustainable waste management solutions that encourage the reduction, re-use and recycling of waste during construction	• Encourage recycling of materials and minimise consumption of resources during construction, operation and maintenance of new transport infrastructure? • Encourage the use of alternative transport methods for the movement of waste in the region? • Protect the integrity of mineral safeguarding areas?
Historic Environment	Conserve and enhance the Peninsula's designated and non-designated heritage assets.	• Protect the outstanding universal value of World Heritage Sites? • Conserve and enhance the significance of designated and non-designated, and their settings? • Conserve and enhance archaeological remains and support the undertaking of archaeological investigations and, where appropriate, recommend mitigation strategies?

SEA theme	Objectives	Assessment questions – will the option/proposal help to:
	Promote understanding, access and enjoyment of the Peninsula's heritage resources.	• Support or improve access to, interpretation and appreciation of the historic environment?
Landscape	Protect and enhance the character and quality of the Peninsula's landscapes, townscapes, villagescapes and seascapes.	• Support the purposes of AONBs and National Parks and duty of Dartmoor National Park and Exmoor National Park? • Support the management plan objectives and priorities of the AONBs and National Parks across the Peninsula? • Support the integrity of the LCAs, LCTs and Heritage Coasts across the Peninsula? • Conserve and enhance locally important landscape, townscape, villagescape and seascape features? • Improve accessibility by sustainable transport to the Peninsula's landscape resources, including within the National Park and AONBs?
Air Quality and Noise	Deliver improvements in air quality in the Peninsula region	• Reduce emissions from transport? • Contribute to improvements in air quality within AQMAs? • Promote the use of zero emission vehicles? • Promote enhancements to green infrastructure networks to facilitate increased absorption and dissipation of nitrogen dioxide and other pollutants?
	Reduce the impact on environmental noise from transportation sources	• Contribute to lowering noise levels?
Climate Change and Flood Risk	Support climate change mitigation across the Peninsula through limiting the contribution of transport to greenhouse gas emissions.	• Limit the increase in the carbon footprint resulting from new transport infrastructure provision and positively contribute to the Peninsula's net zero ambitions? • Promote the use of sustainable modes of transport, including walking, cycling and public transport? • Reduce the need to travel? • Reduce energy consumption from non-renewable resources? • Encourage the uptake of electric and alternatively fuelled vehicles?

SEA theme	Objectives	Assessment questions – will the option/proposal help to:
	Support the resilience of the Peninsula's transport networks to the potential effects of climate change	• Increase the resilience of the transport network to the potential effects of climate change? • Promote a coordinated approach to the management of flood risk across public infrastructure provision? • Improve and extend green infrastructure networks as part of transport infrastructure provision to support adaptation to the potential effects of climate change? • Sustainably manage water run-off, reducing surface water runoff? • Ensure the potential risks associated with climate change are considered through new transport network programmes? • Reduce the impact of extreme weather events on the condition of the transport network?
Healthy Communities	Promote sustainable transport use and reduce the need to travel	• Encourage modal shift to more sustainable forms of travel? • Reduce the need to travel?
	Improve the health and well-being of the Peninsula's residents	• Reduce the impacts of air and noise pollution on health? • Promote the use of healthier modes of travel? • Enhance the provision of, and access to, green infrastructure in the region, in accordance with national standards? • Avoid any negative impacts to the quality and extent of existing recreational assets, such as formal or informal footpaths? • Improve access to the countryside for recreation?
	Support the local economy	• Support traditional and emerging sectors of the Peninsula's economy? • Enhance the vitality of the Peninsula's town and local centres? • Improve accessibility to employment opportunities? • Enhance the productivity of the local economy?
	Improve road safety	• Improve road safety and reduce road accidents?
	Reduce the community severance effects of transport routes	• Reduce community severance (i.e. through improved crossing facilities, reduced traffic speeds and reduced traffic levels)?

3. Assessment of reasonable alternatives for the SIP

3.1. Reasonable alternatives in SEA

3.1.1. A key element of the SEA process is the assessment of 'reasonable alternatives' for the SIP. The SEA Regulations are not prescriptive as to what constitutes a reasonable alternative, stating only that the Environmental Report should present an appraisal of the '*plan and reasonable alternatives taking into account the objectives and geographical scope of the plan*'.

3.2. Development of schemes for delivering through the SIP

3.2.1. As discussed in Chapter 1, the SIP sits within the framework of the overarching strategy document, the Peninsula Transport Strategy. As such, the overarching strategy leading the SIP has already been determined through the adopted strategy. For this reason, there are no appropriate reasonable alternatives to be considered relating to the overall strategy within which the SIP sits. Instead, the key decisions to be made relating to the SIP regard the schemes and projects which can potentially be implemented through the plan. These are therefore the focus of the assessment of reasonable alternatives undertaken through the current SEA process.

Schemes considered for the SIP

3.2.2. To support the development of the SIP, the STB has considered a range of schemes for delivery during the up to 30-year plan period. During the first stage of this process the STB considered a 'long list' of 109 potential transport schemes.

3.2.3. These were considered through a three-phase process, as follows:

- **Stage 1 - Gateway questions:** This considered a series of 'gateway questions' to assess if a proposed scheme is strategic in scale and is appropriate for the SIP.
- **Stage 2 - Multi Criteria Assessment Framework:** This assessed a scheme's impact in addressing the STB's four Transport Strategy outcomes and the five agreed STB Vision Goals (see **Figure 1.2** and **Figure 1.3** above)
- **Stage 3 - Deliverability Assessment:** This assessment was undertaken to ensure that proposed investments will provide value for money and are deliverable. This considered: cost; value for money; affordability; acceptability and timescale.

3.2.4. The purpose of the SIP is not to have a long list of ranked schemes as it is impossible to compare strategic transport schemes that use different modes to achieve different objectives.

3.2.5. The SIP is also intended to act as a 'live document' that can be regularly reviewed and updated, and used to respond to specific calls for schemes, such as the DfT's invitation to STBs to submit bids for Major Road Network (MRN) scheme funding in 2018. The STB will be able to use the SIP to respond to specific requests for thematic investment funds, for example rail resilience investment funds or electric vehicle/zero emission public transport funding opportunities or other such ring-fenced specific funds. The scheme lists may also be amended based on changes

in available information on e.g. scheme costs, change in strategic case for change, future national policy changes or other change that impacts the case for a scheme.

3.2.6. In this context the SIP will therefore be a 'living plan' that will regularly be reviewed throughout the plan period as further studies are undertaken and as more detail on proposed schemes become available. This will include updates to the list of schemes; additional clarity and detail on the scheme proposals; updates to delivery timescales; and updates to scheme funding sources. At this stage therefore, the 60 schemes currently presented in the SIP are in effect the 'reasonable alternatives' for the plan.

3.2.7. These schemes are assessed in the following chapter of this Environmental Report.

4. Assessment of the current version of the SIP

4.1. Assessment of the draft SIP

4.1.1. The Environmental Report must include

- The likely significant effects associated with the draft plan approach; and
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan approach.

4.1.2. This section of the Environmental Report therefore presents assessment findings in relation to the current consultation draft of the SIP through presenting an assessment of the 60 schemes currently put forward through the plan. This is accompanied by a set of proposed mitigation and enhancement measures designed to offset the potential significant adverse effects identified.

4.2. Current version of the SIP

4.2.1. At the current stage, Peninsula Transport are consulting a full draft of the SIP. As discussed above, the draft plan presents a series of potential transport schemes and initiatives for the South West Peninsula, and are grouped under the following:

- **High Priority Schemes:** These are region-wide, cross boundary and multi stakeholder initiatives likely to be transformational to some or all of the region in transport terms.
- **Short Term Strategic Schemes:** These schemes were assessed as strategic in nature and merit inclusion in the regional SIP, however, are not necessarily cross boundary or multi stakeholder driven. They are schemes that are sufficiently advanced that they could commence construction or be delivered within approximately two years.
- **Medium Term Strategic Schemes:** These schemes were assessed as strategic in nature and merit inclusion in the regional SIP, however, are not necessarily cross boundary or multi stakeholder driven. These are schemes which could potentially commence construction or be delivered within approximately two-five years.
- **Long Term Strategic Schemes:** These schemes were assessed as strategic in nature and merit inclusion in the regional SIP, however, are not necessarily cross boundary or multi stakeholder driven. These are schemes which could potentially commence construction within approximately five to ten years.

4.2.2. The schemes are as follows.

Table 4.1 High Priority Schemes

Scheme	Location	Scheme summary
Rail network Decarbonisation	Region wide	Replacement of current SW rolling stock offering more reliable and decarbonised rail and infrastructure to support phase out of all diesel trains in the peninsula. Potential hybrid solution of battery electric trains, both new / repowered trains and static infrastructure.
Peninsula Rail Card	Region wide	Extend Devon and Cornwall Railcard to cover whole peninsula region.
North Devon Line	Devon	Signal and route upgrades to enable reduction in journey times from Exeter Central to Barnstaple from 66 mins to 59 mins. Additional 1tph Barnstaple – Exeter service.
South West Rail Resilience Programme Phase 5	Devon	Completion of final phase of SWRRP Teignmouth and Dawlish and wider resilience works.
Devon Metro - West of England Line	Devon	Additional infrastructure to provide 2tph between Exeter and Axminster. Improving resilience and capacity.
Better Buses for Peninsula	Region wide	Roll out of interoperable ticketing, consistent information and timetabling, and peninsula-wide bus improvements.
Plymouth Metro	Cornwall/ Plymouth	Package of improvements to facilitate metro levels of rail service for Plymouth and SE Cornwall Travel to Work area.
West Cornwall Rail Connectivity Upgrade	West Cornwall	St Ives line capacity improvements, passing loop, extension to the St Erth P&R and through services between Penzance and St Ives.
Devon Metro - Tavistock to Plymouth	West Devon/ Plymouth	Reopening of the Tavistock-Plymouth line – extension of Tamar Valley Line from Bere Alston.
South West Mobile Connectivity	Region wide	Network operators equipment via FTN/GSMR or other network to facilitate consistent 3G/4G/5G mobile connectivity across all lines in the peninsula for passengers and lineside residents.
BSIP Schemes	Region wide	Implementation of continued BSIP programmes across the peninsula.
Bus Decarbonisation	Region wide	Roll out of zero emission bus fleets across the peninsula, revenue and capital.
Demand Responsive Transport (DDRT)	Region wide	Development and delivery of DRT solutions across peninsula. Includes schemes related to rural mobility.
Active travel Investment	Region wide	Integrate active travel with bus and rail, cross boundary and e-bike infrastructure upgrades.
Station access enhancements across all rail stations	Region wide	Enhanced access to rail stations for all users across the peninsula.

Table 4.2 Short Term Strategic Schemes

Scheme	Location	Scheme summary
Reopen Wellington and Cullompton Stations	Somerset	Two new stations at Wellington and Cullompton on Bristol to Exeter line.
Edginswell Station	Torbay	New station at Edginswell to serve Torbay Hospital and local growth areas.
Taunton to Bishops Lydeard	Somerset	Reopening of line to Bishops Lydeard.
A38 Deep Lane Park and Ride	East of Plymouth	Park and ride to Plymouth from Deep Lane and Sherford new community.
A30 Kennards House – 5 Lanes (Plusha)	A30, Plusha west of Launceston	Partial gap closure and safety measures to reduce collision risk.
A38 Trerulefoot to Carkeel Safety Measures	A38, Cornwall	Deployment of average speed and spot cameras and enforcement in partnership with Cornwall Council and Devon and Cornwall Police to improve safety.
Coach links to Exeter and Bristol	Torbay	Improved coach service provision from Torbay to Exeter and Bristol.

Table 4.3 Medium Term Strategic Schemes

Scheme	Location	Scheme summary
Yeovil Junction	Yeovil	Extension of double track section at Yeovil Junction towards Crewkerne by approximately 1.6km.
Gravity freight facility	Somerset	Potential rail freight facility at Gravity site near Bridgwater. Includes new junction and line up to a delineation point.
Additional long distance calls at Bridgwater	Bridgwater	Nine daily Manchester-Exeter services to call at Bridgwater.
Exeter St Davids – Dawlish signalling headways	Exeter St Davids / Dawlish	Reduce headways on mainline from 4 to 3 minutes.
Strategic Rail Freight terminal – Mid Cornwall	Mid Cornwall	Potential rail freight site at Mid Cornwall.
Strategic Rail Freight Interchange at Exeter Riverside Yard	Exeter	Potential for new rail freight site at Exeter Riverside.
West of Plymouth P&R	West Plymouth	Park and Ride service for travellers from Cornwall and northwest.
Tamar Bridge Capacity Management Options	Tamar Bridge	Improvements to enable free flow tolling and long term maintenance plan for the crossing.
A358 Improvements package	A358	Safety, capacity and active travel improvements package between Taunton and Southfields.
Torpoint Ferries capacity improvements	Cornwall/ Plymouth	Highway improvements to improve access to Torpoint ferry.
A38 Deep Lane Junction and Public transport	Plymouth	Junction improvements and public transport enhancements to facilitate growth of Sherford new community.

Scheme	Location	Scheme summary
A37, A361 A39 Connectivity and safety package	Somerset	Safety and resilience measures to improve wider connectivity and remove pinch points.
Paignton branch capacity improvements	South Devon/ Torbay	Additional through platform and footbridge at Newton Abbot, doubling of short single line at Newton Abbot Junction, and replacement of crossover at Paignton.
A38 St Budeaux Interchange	St Budeaux	Capacity improvements to reduce congestion and delays on the SRN and within Plymouth and improve safety by reducing queuing on the A38.
Transport Strategy and multi modal package for Gravity Site, Somerset	Somerset	Development of multi modal access package and transport strategy to facilitate access to the new battery factory at Gravity site, Somerset.
A30 Kennard House to Fivelanes (Plusha)	Cornwall	Long term resolution of safety risks. Junction improvements to rationalise central reserve crossings and reduce safety risk.
A38 Weston Mill Junction	Plymouth	Improvements at A38 Weston Mill / A3064 junction to improve capacity.
A38 Case for Action - Bodmin to Exeter	A38, Bodmin and Exeter	Strategic road and major network (SRN & MRN) improvements to improve journey reliability and safety record on corridor.
Cattedown Roundabout	Plymouth	Improvements to reduce congestion and delays at this junction, improving the capacity of route to Millbay Port. Scheme also provides bus priority and active travel improvements.
A38 Trerulefoot to Carkeel Safety Package	A38 Cornwall	Long term package of interventions to improve conditions for all road users – safety, congestion, air quality concerns in local villages.
A38 Liskeard to Trerulefoot	Cornwall	Long term resolution of safety risks. Junction improvements to rationalise crossings and reduce safety risk.
A374 Western Approach to Millbay	Plymouth	Highway capacity and freight improvements to enhance port access.
Watchet Coastal Erosion Package	North Somerset	Coastal and highways measures, cliff wall stabilisation and B3191 diversion.

Table 4.4 Long Term Strategic Schemes

Scheme	Location	Scheme summary
New Station at Langport and Somerton on Castle Cary - Taunton Line	Somerset	New rail station serving Langport & Somerton between Taunton and Castle Cary.
Heart of Wessex Line Improvement	Castle Cary and Yeovil Penn Mill	Additional passing loop between Castle Cary and Yeovil Penn Mill. Enables additional services – Yeovil to Weymouth and diversional route.
Goodrington Extension and proposed new station and park and ride	Goodrington	Extension of track ownership from Paignton to Goodrington; construction of new single platform adjacent to Torbay owned land; and creation of new park and ride.
Bideford to Barnstaple rail extension	North Devon	Relaying 8km of track from Barnstaple to Bideford to extend existing services.

Scheme	Location	Scheme summary
Tavistock Junction (Yard)	Tavistock/ north of Plymouth	Potential rail freight interchange close to Marsh Mills in Plymouth.
A30 / A303 Blackdown	Blackdown Hills	Enhancement to second strategic route between A358 and Exeter to address capacity and safety issues.
A361 Resilience Package	A361 Somerset	Flood and safety resilience package.
A30 Camborne to Penzance	Cornwall	Safety, capacity and resilience package.
J29-31 – M5 Exeter Gateway	M5 Exeter	Aims to address capacity and congestion on strategic gateway into peninsula. Multi modal package of measures to mitigate congestion.
A303 South Petherton to Southfields – RIS Pipeline Scheme	Somerset	Improvements to the A303 at and between Southern Petherton and Southfields roundabouts, including junction improvements.
Sandy Rd / Holland Rd junction	Plymouth	Junction improvements north of A38 to improve access to Freeport.

4.3. Assessment methodology

4.3.1. The assessment identifies and evaluates the likely significant effects of each potential scheme on the baseline, utilising the SEA Framework developed through scoping as a methodological framework (section 2.3). Findings have been presented through the seven SEA themes developed during scoping:

- Biodiversity
- Water and Soil Resources
- Historic Environment
- Landscape
- Air Quality and Noise
- Climate Change and Flood Risk
- Healthy Communities

4.3.2. Under each of the above SEA themes, assessment findings have been discussed for each potential scheme. In response to the assessment findings, potential mitigation measures have also been proposed, and opportunities identified. This is with a view to informing the ongoing development of the schemes to implementation.

Limitations of assessment

4.3.3. It is important to acknowledge the limitations of the approach to be undertaken to the assessment. These limitations relate to both the scope and coverage of the potential schemes and the nature of the SEA process.

4.3.4. The following considerations should therefore be acknowledged in regard to the assessment:

- Some interventions to be taken forward through the SIP are not currently spatially specific and thus are deployed across the Peninsula. This situation can reduce the confidence in forecasting potential environmental outcomes.

- Where the proposed intervention has a specific geographic location, the available scheme definition and the subsequent scheme design activities can lead to uncertainties as to the resultant impact. In such situations it is recognised that potential impacts identified in the SEA may well be capable of being avoided or mitigated during subsequent scheme design activities.

4.3.5. Where appropriate, the SEA will acknowledge these limitations throughout the process.

4.3.6. More generally, every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the policy approaches under consideration, and limited understanding of the baseline.[4] Because of the uncertainties involved there is inevitably a need to make assumptions. Assumptions are made cautiously and explained within the text. The aim is to strike a balance between comprehensiveness and conciseness/accessibility to the public. In many instances, given reasonable assumptions, it is not possible to predict significant effects, but it is possible to comment on merits (or otherwise) in more general terms.

4.3.7. It is important to note that effects are predicted taking account of the criteria presented within Schedule 1 of the SEA Regulations. So, for example, account is taken of the probability, duration, frequency and reversibility of effects as far as possible. Cumulative effects are also considered. These effect 'characteristics' are described within the assessment as appropriate.

[4] The implication being that it is difficult, if not impossible, to identify a 'cause-effect relationship' with any certainty.

5. Assessment findings

5.1.1. The following tables present a summary of the assessment findings relating to the 60 schemes proposed through the SIP. These have been presented by the relevant category (i.e. High Priority Schemes; Short Term Strategic Schemes; Medium Term Strategic Schemes; and Long-Term Strategic Schemes).

5.1.2. **Appendix C** presents the full assessment findings for each scheme and the mitigation measures/enhancements opportunities identified.

Table 5.1: Summary of assessment findings, Tier One: Region wide schemes

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Rail network Decarbonisation								**Summary** The decarbonisation of the current rolling stock across the peninsula will have positive effects for air quality, noise pollution, landscape and climate change mitigation. **Mitigation measures and enhancement opportunities** None proposed.
Peninsula Rail Card								**Summary** The extension of the Devon and Cornwall Railcard to cover the whole peninsula region will have positive effects for accessibility and climate change mitigation. **Mitigation measures and enhancement opportunities** None proposed.
North Devon Line								**Summary** Signal and route upgrades to enable a reduction in journey times from Exeter Central to Barnstaple will have minor positive effects for accessibility. **Mitigation measures and enhancement opportunities** None proposed.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
South West Rail Resilience Programme Phase 5								**Summary** By delivering the final phase of the South West Rail Resilience Programme between Teignmouth and Dawlish, the scheme will have significant positive effects for climate change adaptation, as well as minor positive effects for air quality and climate change mitigation. The scheme will have significant positive effects for communities given the route is a key part of the south west's railway network. **Mitigation measures and enhancement opportunities** Cliff stabilisation measures should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
Devon Metro - West of England Line								**Summary** By delivering additional infrastructure to provide two trains per hour between Exeter and Axminster, thereby improving resilience and capacity, the scheme will have positive effects for accessibility. It will also support air quality and climate change mitigation, through supporting alternative modes of transport to the private car. **Mitigation measures and enhancement opportunities** The design and layout of the scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
Better Buses for Peninsula								**Summary** The roll out of interoperable ticketing, consistent information and timetabling, and peninsula-wide bus improvements will have positive effects for accessibility, air quality, and climate change mitigation. **Mitigation measures and enhancement opportunities** None proposed.
Plymouth Metro								**Summary** By delivering rail infrastructure enhancements to facilitate improved services in the vicinity of Plymouth, the scheme will have positive effects for air quality and climate change mitigation. The measures will also have significant positive effects for accessibility.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								Mitigation measures and enhancement opportunities The design and layout of the initiatives proposed by the scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
West Cornwall Rail Connectivity Upgrade								**Summary** By delivering line capacity improvements in St Ives, a passing loop, an extension to the St Erth Park and Ride, and through services between Penzance and St Ives, the scheme will have positive effects for air quality and climate change mitigation and support accessibility in West Cornwall. **Mitigation measures and enhancement opportunities** The design and layout of the initiatives proposed by the scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
Devon Metro - Tavistock to Plymouth								**Summary** The reopening of the Tavistock-Plymouth line will have positive effects for accessibility, air quality, and climate change mitigation. **Mitigation measures and enhancement opportunities** The measures required to reopen the railway line should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and noise pollution.
South West Mobile Connectivity								**Summary** By facilitating consistent 3G/4G/5G mobile connectivity across all lines in the peninsula for passengers and lineside residents, the scheme will likely make train travel a more attractive option. **Mitigation measures and enhancement opportunities** None proposed.
BSIP Schemes								**Summary** The implementation of continued BSIP programmes across the peninsula will have positive effects for accessibility, air quality, and climate change mitigation. **Mitigation measures and enhancement opportunities**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								None proposed.
Bus Decarbonisation								**Summary** The roll out of zero emission bus fleets across the peninsula will have positive effects for air quality, noise pollution, and climate change mitigation. **Mitigation measures and enhancement opportunities** None proposed.
Demand Responsive Transport (DDRT)								**Summary** By developing and delivering DDRT solutions across the peninsula, including schemes related to rural mobility, the scheme will have positive effects for accessibility. **Mitigation measures and enhancement opportunities** None proposed.
Active travel Investment								**Summary** By integrating active travel with bus and rail, and upgrading cross boundary and e-bike infrastructure, the scheme will have positive effects for air quality, noise pollution, climate change mitigation, and accessibility, as well as the fabric and setting of the historic environment and landscape and townscape character. **Mitigation measures and enhancement opportunities** None proposed.
Station access enhancements across all rail stations								**Summary** By enhancing access to rail stations for all users across the peninsula, the scheme will have positive effects for accessibility. **Mitigation measures and enhancement opportunities** None proposed.

Key:

Likely adverse effects (without mitigation measures)	
Likely positive effect	
Neutral/no effect	
Uncertain effects	

Table 5.2: Summary of assessment findings, Tier Two: Strategic schemes (Short term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Reopen Wellington and Cullompton Stations								**Summary** By reopening the railway stations at Wellington and Cullompton, the scheme will have significant positive effects for accessibility, air quality and climate change mitigation. The scheme also has the potential to help limit the impacts of road traffic on key environmental receptors through supporting modal shift. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character. There may also need to be a need to manage potential flood risk issues locally.
Edginswell Station								**Summary** By opening a new railway station at Edginswell, the scheme will have significant positive effects for accessibility, air quality and climate change mitigation. The scheme also has the potential to help limit the impacts of road traffic on key environmental receptors through supporting modal shift. **Mitigation measures and enhancement opportunities**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								The scheme should consider impacts on landscape and townscape character, and consider any flood risk issues identified.
Taunton to Bishops Lydeard								**Summary** The reopening of the railway line to Bishops Lydeard will have positive effects on accessibility, air quality and climate change mitigation. **Mitigation measures and enhancement opportunities** The measures required to reopen the railway line should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and noise pollution.
A38 Deep Lane Park and Ride								**Summary** By delivering a new park and ride service to Plymouth from Deep Lane and Sherford new community, the scheme will have positive effects on accessibility. Park & Ride will support some limitation of greenhouse gas emissions and air and noise quality through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey. In addition, there may be localised impacts on the quality of the public realm from increased traffic flows. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.
A30 Kennards House – 5 Lanes (Plusha)								**Summary** By delivering partial gap closure and safety measures to reduce collision risk, the scheme will have positive effects on road safety. **Mitigation measures and enhancement opportunities** Scheme design should consider the setting of the historic environment and landscape character.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
A38 Trerulefoot to Carkeel Safety Measures								**Summary** By deploying average speed and spot cameras and enforcement, to improve safety, the scheme will have positive effects on road safety. **Mitigation measures and enhancement opportunities** None proposed.
Coach links to Exeter and Bristol								**Summary** By improving coach service provision from Torbay to Exeter and Bristol, the scheme will have positive effects on accessibility. **Mitigation measures and enhancement opportunities** None proposed.

Key:

Likely adverse effects (without mitigation measures)	
Likely positive effect	
Neutral/no effect	
Uncertain effects	

Table 5.3: Summary of assessment findings, Tier Two: Strategic schemes (Medium term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Yeovil Junction								**Summary** By extending the double track section at Yeovil Junction towards Crewkerne by approximately 1.6km, the scheme will have positive effects on accessibility, and through supporting modal shift, air quality and noise and climate change mitigation. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.
Gravity freight facility								**Summary** Whilst likely to lead to localised impacts in the vicinity of the facility, the scheme has the potential to limit freight movements on the wider road network. This has the potential to support climate change mitigation, air and noise quality, and the quality of neighbourhoods. **Mitigation measures and enhancement opportunities** The scheme should consider localised impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, flood risk and air and noise quality.
Additional long distance calls at Bridgwater								**Summary** By adding nine daily Manchester-Exeter services to call at Bridgwater, the scheme will have positive effects on accessibility. **Mitigation measures and enhancement opportunities** None proposed.
Exeter St Davids – Dawlish signalling headways								**Summary** By reducing headways on the mainline from 4 to 3 minutes, increasing potential frequencies and capacity, the scheme will have positive effects on accessibility. **Mitigation measures and enhancement opportunities** None proposed.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Strategic Rail Freight terminal – Mid Cornwall								**Summary** A potential new rail freight facility in Mid-Cornwall will have positive effects for air quality and noise pollution, climate change mitigation, and limit impacts of freight movements on local communities. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character and flood risk.
Strategic Rail Freight Interchange at Exeter Riverside Yard								**Summary** The potential new rail freight facility at Exeter Riverside, close to St David's Station, will have positive effects on air quality and noise pollution, climate change mitigation, and help limit impacts of freight movements on local communities. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, townscape character and flood risk.
West of Plymouth P&R								**Summary** By delivery a new park and ride service to Plymouth, for travellers from Cornwall and the northwest, the scheme will have positive effects on accessibility. It is noted that environmental impacts will depend on the exact location of the park and ride site, which is uncertain at this stage. Park & Ride will support some limitation of greenhouse gas emissions and air and noise quality through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.
Tamar Bridge Capacity								**Summary**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Management Options								By improving free flow tolling at Tamar Bridge, and delivering a long-term maintenance plan for the crossing, the scheme will have positive impacts on accessibility and help limit the localised impacts of congestion. **Mitigation measures and enhancement opportunities** None proposed.
A358 Improvements package								**Summary** By delivering safety, capacity and active travel improvements between Taunton and the A303 at Southfields, the scheme will have positive impacts on road safety and accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, air and noise quality, climate change mitigation, and flood risk.
Torpoint Ferries capacity improvements								**Summary** By delivering highway improves to improve access to Torpoint ferry, the scheme will have positive impacts on accessibility. **Mitigation measures and enhancement opportunities** None proposed.
A38 Deep Lane Junction and Public transport								**Summary** By delivering public transport enhancements to facilitate growth of Sherford new community, the scheme will have positive impacts on accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, air quality, climate change mitigation, and flood risk.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
A37, A361 A39 Connectivity and safety package								**Summary** By delivering safety and resilience measures to improve wider connectivity and remove pinch points, the scheme will have positive impacts on road safety. **Mitigation measures and enhancement opportunities** None proposed.
Paignton branch capacity improvements								**Summary** By delivering an additional through platform and footbridge at Newton Abbot, doubling the short single line at Newton Abbot, and replacing the crossover at Paignton, the scheme will have positive effects on air quality, climate change mitigation, and accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.
A38 St Budeaux Interchange								**Summary** The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution. Hence, mixed effects are anticipated. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, air and noise quality, and flood risk.
Transport Strategy and multi modal package for Gravity Site, Somerset								**Summary** By delivering a multi modal access package and transport strategy to facilitate access to the new battery factory at Gravity site, Somerset, the scheme will have positive effects on air quality, noise pollution, climate change mitigation, and accessibility. **Mitigation measures and enhancement opportunities**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, noise quality, and flood risk.
A30 Kennard House to Fivelanes (Plusha)								**Summary** By delivering junction improvements to rationalise central reserve crossings and reduce collision risk, the scheme will have positive effects on road safety. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
A38 Weston Mill Junction								**Summary** The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements have the potential to lead to an increase in traffic flows over a wider area. Hence, mixed effects are anticipated. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.
A38 Case for Action - Bodmin to Exeter								**Summary** It is currently unclear whether the scheme will lead to significant effects under any of the SEA themes given a strategic study is due to be undertaken to determine potential schemes **Mitigation measures and enhancement opportunities** None proposed.
Cattedown Roundabout								**Summary** By delivering improvements to reduce congestion and delays at Cattedown Roundabout, improving the capacity of the route to Millbay Port, and providing bus priority and active travel improvements, the scheme will have positive impacts on air quality, noise pollution, and accessibility. **Mitigation measures and enhancement opportunities**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								The scheme should consider impacts on biodiversity, the setting of the historic environment, climate change mitigation, and flood risk.
A38 Trerulefoot to Carkeel Safety Package								**Summary** By delivering a package of interventions to improve conditions for all road users, including safety, congestion, and air quality concerns in local villages, the scheme will have positive effects on air quality and health and wellbeing. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and noise pollution.
A38 Liskeard to Trerulefoot								**Summary** By delivering the long term resolution of safety risks, the scheme will have positive effects on road safety. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character.
A374 Western Approach to Millbay								**Summary** Whilst the scheme will help manage congestion, with associated benefits, it has the potential to lead to an increase in traffic flows over a wider area, with implications for air and noise quality, climate change mitigation and impacts on the local environment. Hence, mixed effects are anticipated. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, townscape character, and flood risk.
Watchet Coastal Erosion Package								**Summary**

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								By delivering cliff wall stabilisation measures and the diversion of the B3191, the scheme will have positive effects for climate change adaptation given it will increase the resilience of the transport network in this location to the impacts of climate change, particularly coastal erosion. **Mitigation measures and enhancement opportunities** Cliff stabilisation measures should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.

Key:

Likely adverse effects (without mitigation measures)	
Likely positive effect	
Neutral/no effect	
Uncertain effects	

Table 5.4: Summary of assessment findings, Tier Two: Strategic schemes (Long term)

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
New Station at Langport and Somerton on Castle Cary - Taunton Line								**Summary** By opening a new railway station serving Langport and Somerton, between Taunton and Castle Cary, the scheme will have positive effects for air quality, climate change mitigation, and accessibility. **Mitigation measures and enhancement opportunities** These are dependent on the location, design and layout of the new station.
Heart of Wessex Line Improvement								**Summary** The scheme will support accessibility, air and noise quality and climate change mitigation. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.
Goodrington Extension and proposed new station and park and ride								**Summary** By constructing a new single platform adjacent to Torbay owned land, and creating a new park and ride, the scheme will have positive effects on air quality, climate change mitigation, and accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.
Bideford to Barnstaple rail extension								**Summary** By relaying 8km of track from Barnstaple to Bideford to extend existing services, the scheme will have positive effects on air quality, climate change mitigation, and accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, noise quality, and flood risk.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
Tavistock Junction (Yard)								**Summary** The scheme has the potential to improve the capacity of rail freight services in Plymouth, supporting a removal of freight from the road network. This will have benefits for air and noise quality, climate change mitigation and the quality of neighbourhoods. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.
A30 / A303 Blackdown								**Summary** Whilst the scheme is at an early stage of development, by delivering enhancements to the second strategic route between the A358 and Exeter to address capacity and safety issues, the scheme supports accessibility. The scheme has the potential to lead to significant impacts on landscape character given that this route passes through the Blackdown Hills National Landscape. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and climate change mitigation.
A361 Resilience Package								**Summary** Whilst the scheme is at an early stage of development, by delivering a flood and safety resilience package on the A361, the scheme will have positive effects for climate change adaptation and road safety. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.
A30 Camborne to Penzance								**Summary** Whilst the scheme is at an early stage of development, by delivering a safety, capacity and resilience package, the scheme will have positive effects for road safety. However, the scheme is constrained from a biodiversity and historic environment standpoint.

Scheme	Biodiversity	Water and Soil Resources	Historic Environment	Landscape	Air Quality and Noise	Climate Change and Flood Risk	Healthy Communities	Summary of assessment findings and mitigation measures and enhancement opportunities
								Mitigation measures and enhancement opportunities The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.
J29-31 – M5 Exeter Gateway								**Summary** Whilst the scheme is at an early stage of development, by addressing capacity and congestion issues on the strategic gateway into the peninsula, through a multi-modal package of measures to mitigate congestion, the scheme will have positive effects for accessibility. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, climate change mitigation, and flood risk.
A303 South Petherton to Southfields – RIS Pipeline Scheme								**Summary** Through enhancing traffic flows at a highly congested part of the A303, the scheme has the potential to support air and noise quality on the route, and promote road safety. The scheme however the potential to increase traffic flows over a wider area, which could adversely impact with associated environmental implications. Mixed effects therefore. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.
Sandy Road / Holland Road junction								**Summary** The scheme has the potential to bring mixed effects. Whilst it will help limit congestion in the area around the junction, with benefits for those living locally, in the longer term it may lead to an increase in overall traffic flows in the area, with implications for the quality of the built environment. **Mitigation measures and enhancement opportunities** The scheme should consider impacts on landscape and townscape character, and flood risk..

Key:

Likely adverse effects (without mitigation measures)	
Likely positive effect	
Neutral/no effect	
Uncertain effects	

6. What are the next steps?

6.1.1. This Environmental Report has been published to accompany the draft SIP and released alongside the plan for consultation. Following the consultation period, comments will be reviewed and analysed. The final SIP will then be developed, with a view to adoption later in 2025. Any changes arising to the SIP will need to be assessed as part of the SEA process.

6.1.2. SEA Regulations 16.3c)(iii) and 16.4 require that a 'statement' be made available to accompany the plan, as soon as possible after the adoption of the plan or programme. The purpose of the SEA Statement is to outline how the SEA process has influenced and informed the SIP development process and demonstrate how consultation on the SEA has been taken into account. As the regulations outline, the statement should contain the following information:

- The reasons for choosing the preferred measures for the SIP as adopted in the light of other reasonable alternatives dealt with;
- How environmental considerations have been integrated into the SIP;
- How consultation responses have been taken into account; and
- Measures that are to be taken to monitor the significant environmental effects of the SIP.

6.1.3. To meet these requirements, an SEA Adoption Statement will be published with the adopted version of the SIP.

Appendix A Scoping consultation responses

Table A.1.1 Consultation responses on the SEA Scoping Report

Consultee	Consultation response	How the response was considered and addressed
Blackdown Hills & East Devon National Landscape Planning Officer, response received 22nd October 2021	It is important to recognise that AONBs and National Parks are of equal status in planning terms and originate from the same legislation, and this does not appear to be the case in the document. The statutory purpose of AONBs is to conserve and enhance natural beauty and there is a statutory duty on relevant authorities to have regard to the purposes of both AONBs and National Parks. It is therefore suggested that paragraph 3.36 is merged with 3.37 to read as follows: National Park Authorities and AONB Partnerships on behalf of local authorities have a statutory duty to prepare management plans which establish the ambitions and strategies required to maintain the special qualities of these protected landscapes. Developed in consultation with partner organisations, communities, visitors and businesses, the management plans describe the special qualities of the National Parks/AONBs and set out long term visions and priorities for the landscapes. In this context, the following management plans cover the two National Parks and nine AONBs within the Peninsula region: …	Scoping information has been updated accordingly.
	It is not clear whether the 2021 version of the NPPF is reflected in the report, but in the first bullet point of paragraph 3.33 we would consider it relevant to this strategy to include the reference to development in the setting of AONBs and National Parks, i.e. “The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.”	Scoping information has been updated accordingly.
	We note that paragraph 7.27 includes the statement ‘Important areas for experiencing dark skies within the Peninsula region include Dartmoor National Park, Exmoor National Park and Bodmin Moor’ and this is repeated as a key sustainability issue. The evidence for highlighting these three areas is not apparent and we would suggest that all the protected landscapes in the peninsula are prized for their remaining tranquillity and dark skies.	These protected landscapes are particularly important for dark skies, which is why they have been highlighted.
	It is suggested that Table 7-1 and Table 12-1 are amended to reflect the proposed change to paragraphs 3.36/37, i.e.	Updated, see **Section 2.3** of this report.

Consultee	Consultation response	How the response was considered and addressed
	• Support the purposes of AONBs and National Parks and duty of Dartmoor National Park and Exmoor National Park? • Support the management plan objectives and priorities of the AONBs and National Parks across the Peninsula?	
Historic England Transport Planning Team Leader, response received 1st October 2021	Historic England welcomes the inclusion of an historic environment and landscape themes in the Scoping Report. This reflects the sensitivity of the historic environment given the wealth of designated and non-designated heritage assets found within the five local authorities in the Peninsula as well as its many areas of historic townscapes, landscapes and seascapes, which may be heritage assets in their own right or contribute to the settings and significance of others.	Comment noted.
	The significance and settings of heritage assets and the character of wider areas can be affected by existing transport infrastructure as well as by proposed transport improvements. Historic England supports sustainable change that avoids, minimises and mitigates harm to the historic environment and, where possible, enhances its significance and increased access, understanding and enjoyment. Our transport infrastructure can also an important heritage asset in its own right from prehistoric trackways and Roman roads to medieval bridges, the development of canals and railways during the industrial revolution, and the introduction of motor transport and aviation in the 20th century. Further information can be found on our website.	Comment noted.
	Turning to section 3 of the Scoping Report, it would be worth expanding the description of Local Plans (page 11) to mention that they contain policies on a number of relevant topics including transport and the historic environment. The presence of 'made' Neighbourhood Plans within the Peninsula should also be included as they form part of the 'development plan', as should the South and South West Marine Plans.	Scoping information has been updated accordingly.
	In relation to the review of relevant plans and programmes for the historic environment (pages 15-18), we have found much to welcome. Historic England is pleased to see the recognition of the Cornwall and West Devon Mining Landscape World Heritage Site within the Peninsula and the references to the Management Plan and adopted SPD. There is, however, a more recent version of the Management Plan 2020-2025 that should be included instead. Likewise we also welcome mention of the Jurassic Coast World Heritage Site and the recent Partnership Plan 2020-2025.	Scoping information has been updated accordingly.
	We welcome the inclusion of key messages from the National Planning Policy Framework (although the correct date is 2021) and the reference to the associated Planning Practice Guidance. We would, however, like to	Scoping information has

Consultee	Consultation response	How the response was considered and addressed
	see some key messages for non-designated heritage assets given the presence of so many within the Peninsula. Please see the relevant local planning authority websites and Historic Environment Records for further information on these.	been updated accordingly.
	We are pleased to see mention of key pieces of historic environment legislation. However, the Marine and Coastal Access Act 2009 could usefully be added.	Scoping information has been updated accordingly.
	We also welcome reference to the role of Historic England. This should mention our roles in in identifying and protecting the historic environment, including that we are the Government's statutory adviser on the historic environment and a statutory consultee to plan-making and decision-taking. Further information is available on our website. We are pleased to see that the Scoping Report draws attention to a range of our information and advice, to which you could include our approach to transport and the historic environment and the following publications: Modern Infrastructure and the Historic Environment, Streets for All and Streets for All South West.	Scoping information has been updated accordingly.
	Apart from those listed above, we have a few additional suggestions for other items that could also be usefully mentioned here in the context of preparing the Peninsula Transport Strategy, even if they are discussed in more detail in section 6: • UNESCO World Heritage Convention • ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (2011) • The Convention for the Protection of the Architectural Heritage of Europe and The European Convention on the Protection of Archaeological Heritage • Heritage Strategies prepared by the local authorities, e.g. adopted East Devon Heritage Strategy (2019) and the emerging Cornwall Heritage Strategy • Conservation area character appraisals and management plans • Historic England's Heritage at Risk programme and local authority risk registers (where they exist)	Scoping information has been updated accordingly.
	We have also briefly considered the information presented for Landscape (pages 18- 19). We particularly welcome mention of the European Landscape Convention, the NPPF key messages and the management plans for the two National Parks and the Areas of Outstanding Natural Beauty. We would, however, point out the Dartmoor National Park Management Plan 2021-2026 is now adopted.	Scoping information has been updated accordingly.
	You may like to consider where best to cover wider historic areas, including historic town/village-scapes, landscapes and seascapes, and relevant historic	Scoping information has

Consultee	Consultation response	How the response was considered and addressed
	assessments and characterisation studies for them. These do not appear to have been captured in sections 6 or 7.	been updated accordingly.
	Historic England welcomes the inclusion of such comprehensive baseline information on the historic environment for designated heritage assets. In relation to Figure 6-1, however, we suggest adding some caveats to clarify that this shows designated heritage assets except for conservation areas and listed buildings, the latter which can be seen in Figure 6-2 except for grade II listed buildings.	Scoping information has been updated accordingly.
	In relation to locally important heritage features, we consider these should be referred to in paragraph 6.15 (page 44) as 'non-designated heritage assets' given that this is the terminology used in the NPPF. In addition to the HERs, we would expect to see reference to local authority websites for other sources of information for identifying non-designated heritage assets, e.g. local lists and in conservation area character appraisals. If there any identified areas of archaeological potential in the Peninsula and if so, these should be mentioned. However, we are pleased to see the intention to assess the potential impacts on non-designated heritage assets in greater detail later in the IIA process when the provisions of the Peninsula Transport Strategy are clearer.	Updated, see **Appendix B**.
	We are pleased to see the information presented about Heritage at Risk within the Peninsula in paragraph 6.18 and Table 6-3. We note the challenges for understanding if there are any grade II listed heritage assets at risk as mentioned in paragraph 6.19. Once the contents of the Peninsula Transport Strategy become clearer, we would encourage you to give further consideration to heritage at risk and in particular if there are any assets at risk for transport-related reasons and whether the Strategy offers options for their conservation and enhancement. As part of this, it would be worth asking local authority archaeology and conservation advisers if they have any local registers or are otherwise aware of any assets that are at risk.	Comment noted.
	We recommend a fuller explanation of the planning system in relation to the conservation and enhancement of designated and non-designated heritage assets at paragraph 6.1 (page 41) as this is not necessarily accurate in terms of protection and when Historic England is consulted. Further information can be found on our website here and here. Other national amenity societies are also consultees for certain application types.	The purpose of this section is to provide a brief introduction to the baseline summary, rather than a detailed explanation of the planning system.
	Historic England welcomes the summary of the future baseline. Some additional suggestions for inclusion are:	Updated, see **Appendix B**.

Consultee	Consultation response	How the response was considered and addressed
	• Harm can be caused to the significance of heritage assets and their settings and the experience of being in an historic townscape, landscape or seascape due to noise and air quality as well as from the visibility of infrastructure and traffic • You could note at 6.22 that public realm improvements often accompany new transport infrastructure, which can offer opportunities to improve settings and the quality of historic streetscapes, townscapes and landscapes, as well as to include interpretation • New development may also improve public access to and enjoyment of heritage assets	
	While we welcome the identification of key sustainability issues, we recommend the inclusion of one final sustainability issue as follows: • The need to conserve the significance of designated and non-designated heritage assets, including their settings, by avoiding, minimising and mitigating negative impacts to this irreplaceable resource and to maximise their enhancement, understanding and enjoyment for the benefit of existing and future generations.	Updated, see **Section 2.3** of this report.
	We have briefly considered the material in this section (pages 49-56). While we do not wish to comment in detail, we would just reiterate that consideration of the impacts on the historic village/townscapes, landscapes and seascapes either needs to be covered in this section or in section 6. The Proposed IIA Framework indicates it was perhaps the intention to do this in section 7, in which case, we would expect to see information gathered from relevant historic landscape, seascape and townscape/village-scape assessments and characterisation studies summarised here. The local authority archaeology and conservation advisers would be well placed to direct you to these.	Comment noted, this has been considered in this report.
	Historic England has considered the proposed IIA Objectives and Assessment Questions for the Historic Environment theme in Table 6-4 (page 46) and again as part of Table 12-1 (pages 85-88). We have some minor suggestions for the wording: ~~Preserve~~ Conserve and enhance the Peninsula's designated and non-designated heritage ~~resource, including its historic environment and archaeological~~ assets • ~~Conserve~~ Protect the outstanding universal value of World Heritage Sites? • Conserve and enhance the significance of ~~buildings and structures of architectural or historic interest, both~~ designated and non-designated heritage assets and their settings?	Updated, see **Table 2.2** of this report.

Consultee	Consultation response	How the response was considered and addressed
	• ~~Conserve and enhance the special interest, character and appearance of conservation areas and their settings?~~ • Conserve and enhance archaeological remains and support the undertaking of archaeological investigations and, where appropriate, recommend mitigation strategies? Promote understanding, access and enjoyment of the Peninsula's heritage resources • Support or improve access to, interpretation and ~~understanding~~ appreciation of the historic environment?	
	We are unsure from the information provided in the Scoping Report if is there is the need for an assessment question for archaeological remains. If there are specific reasons for including this, such as cases of uncovering important, non-designated heritage assets of archaeological interest during transport works, we suggest that this is explained in section 6 perhaps in the key sustainability issues.	This assessment question is needed as archaeological remains are an important aspect of the historic environment.
	We have also considered the proposed IIA Objectives and Assessment Questions for the Landscape theme in Table 7-1 (page 56) and again as part of Table 12-1 (pages 85-88). We support the objective and associated assessment questions.	Comment noted.
Mendip Hills National Landscape Transport Planning Team Leader, response received 21st October 2021	The Mendip Hills AONB and the 'setting' of the Mendip Hills AONB. The nationally protected landscape of the Mendip Hills AONB covers 198 square kilometres from Bleadon in the west to Chewton Mendip in the east. The AONB partly lies within the North Somerset to the south-west of the wider Bristol area and south-east of Weston-Super-Mare. Areas of Outstanding Natural Beauty are some of the UK's most cherished and outstanding landscapes. The Countryside and Rights of Way (CRoW) Act 2000 confirmed the significance of the AONBs and Section 85 places a statutory duty on all relevant authorities to have regard to the purpose of conserving and enhancing natural beauty when discharging any function in relation to, or affecting land within as Area of Outstanding Natural Beauty. Potential development proposals outside of the boundaries of AONBs that may have an impact within the designated area, are also covered by the 'duty of regard'. The concept of 'setting' is often used to describe the area of land within which activities or changes could affect the associated AONB. The Government's Planning Practice Guidance draws attention to the concept of 'setting' and the Section 85 duty of regard to AONBs stating that: *'Land within the setting of these areas often makes an important contribution to maintaining their natural beauty, and where poorly located or designed development can do significant harm. This is especially the case where long views from or to the designated landscape are*	Comment noted

Consultee	Consultation response	How the response was considered and addressed
	identified as important, or where the landscape character of land within and adjoining the designated area is complementary. Development within the settings of these areas will therefore need sensitive handling that takes these potential impacts into account.' (PPG, Natural Environment (Landscape) section Paragraph: 042 Reference ID: 8-042-20190721 Revision date: 21/07/2019 Development outside of an AONB is capable of affecting the AONB and as such, the potential for effects on the AONB special qualities and distinctive characteristics are a consideration. Furthermore, PPG Natural Environment states; '*All development in National Parks, the Broads and Areas of Outstanding Beauty will need to be located and designed in a way that reflects their status as landscapes of the highest quality. Where applications for major development come forward, paragraph 176 (NPPF 2021) of the Framework sets out a number of particular considerations that should apply when deciding whether permission should be granted.* Paragraph: 041 Reference ID: 8-041-20190721 Revision date: 21 07 2019 The Mendip Hills AONB Partnership wish it to be noted that AONBs have equal protection status to National Parks in planning law, as demonstrated in the designation of the nationally important protected landscapes.	
	Page 19 Paragraph 3.37 The DEFRA 25 Year Environmental Plan sets out under paragraph 2.2.1 that '*Some of England's most beautiful landscapes and geodiversity are protected via a range of designations including National Parks and Areas of Outstanding Natural Beauty (AONBs)…Over the next 25years we want to make sure that they are not only conserved but enhanced'. Paragraph 2.2.2 further sets out that 'In England, a quarter of our landscape is designated in this way, around 10% as National parks and 15% as AONBs. We will make sure they continue to be conserved and enhanced, while recognising that they are living landscapes that support rural communities…'.* The Mendip Hills AONB Partnership welcomes the inclusion of our Management Plan as a material consideration, and the emphasis on not only conserving and enhancing our special qualities as laid out in the Statement of Significance, but in line with the Glover review the *recovery* of the natural beauty of the AONBs. Traffic in and around the setting of the Mendip Hills AONB continues to detract from people's enjoyment of the environment and raises safety issues for vulnerable road users. Public transport needs to be improved to reduce the impact and enable greater access for people with mobility problems and those without access to private cars. Traffic including Heavy Goods Vehicles impact on the AONB in variety of ways, including tranquillity, visual impact and damage to buildings.	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	Development pressure on the AONB comes from many sources, including proposals within the setting of our northern boundaries for significant housing growth that will bring the urban area closer to the edge of the AONB, proposals to double the capacity of Bristol Airport to accommodate 20mppa, increasing road traffic, and recreational use, and with the potential to impact on the special qualities that create the sense of place, and identity of the Mendip Hills AONB. There are also development pressures along our southern boundaries which may impact on the AONB. The impact of development on the protected landscape and the special qualities of the Mendip Hills AONB needs to be carefully considered, and where supported requires appropriate, and acceptable mitigation measures. Noise and activity arising from development (including transport infrastructure) together with lighting, can have an adverse impact on the areas tranquillity, dark skies and protected species like bats. Mapping of light pollution has shown that the area of dark skies in the Mendips is shrinking. The AONB Partnership Position Statement on Dark Skies seeks local authorities and others to minimise the impact of lighting. Design of roads, signage, and lighting can have a significant impact on the visual appearance of the landscape. Removing unnecessary visual clutter, and consideration of any new signage, is essential for an area in which five local authorities boundaries meet. There is a need for highways authorities to use discretion when following national regulations, and to demonstrate duty of regard for the AONB. There are opportunities within the Mendip Hills AONB to deliver 'net environmental gain', supporting the objectives of the Defra 25 Year Environment Plan.	
	Page 27 Chapter 4 Biodiversity Habitats of importance in the Mendip Hills are heathland, acid grassland, calcareous grassland, neutral grassland (meadows), calaminarian grassland (occur on lead mined spoil heaps), purple moor grass, and semi-natural ancient woodland with typical Mendip species, ash and lime. The Mendip Hills AONB contains many sites designated for their biodiversity, including the European designations: - Chew Valley Lake Special Protection Area (SPA) - North Somerset and Mendip Bats Special Area of Conservation (SAC) - Mendip Limestone Grassland Special Area of Conservation (SAC) - Mendip Woodlands Special Area of Conservation (SAC) that includes the National Nature Reserves (NNR) of Rodney Stoke and Ebbor Gorge There are also 27 Sites of Special Scientific Interest (SSSI) designated for their national importance. 96% of the 2712 ha designated SSSI is in favourable, or unfavourable and recovering condition. Local Wildlife Sites act as buffers, stepping stones, and corridors for these nationally designated wildlife sites.	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	Section 41 of the Natural Environment & Rural Communities Act 2006 list of species of principle importance 5 found in England identified as requiring action under the UK Biodiversity Action Plan continues to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. 6 A significant number of these are found in the designated sites listed above. The relevant biodiversity objectives of the Mendip Hills AONB Management Plan are as follows: BG1 Ensure that there is no net loss of characteristic habitats and species. BG2 Promote a landscape scale approach to the conservation and enhancement of ecological networks within and adjoining the AONB. We consider that any off site BNG could be delivered through West of England's Nature Partnership's Nature Recovery Networks and potentially B-Lines zones.	
	Page 35 Water and Soil resources There is little or no risk of flooding within the hills, as rivers flow underground in this limestone landscape, but flooding has been experienced in the Chew Valley and Cheddar, where the streams and river emerge. North and Mid Somerset, and the Bristol Avon Catchment Flood Management Plans cover the AONB. Large parts of the AONB are within a Groundwater Source Protection Zone due to its contribution to the public water supply. Ground water quality is generally good overall although there is a need to reduce sources of diffuse agricultural pollution into the groundwater and water courses, and run-off, and soil erosion into water courses. The relevant water, soils and geodiversity resources objectives of the Mendip Hills AONB Management Plan are as follows: Biodiversity and Geodiversity Objective. BG6 Increase awareness of the Mendip Hills geology, particularly cave systems in relation to the importance they play in water management and water supply. Natural resources Objectives; N1 Recognise and promote the benefits and relevance of the AONB as a valuable source of ecosystem services, economic and health benefits. N2 Promote conservation of water resources and enhance their quality taking measures to reduce low flows and flooding by appropriate management and use. N3 Promote sustainable management of soils in accordance with best practice to minimise erosion and water pollution and maximise resilience to drought.	Comment noted.
	Page 41 Historic Environment AONB designation recognises the importance of heritage and reinforces the need to protect and manage characteristic features. The Mendip Hills have evidence of human settlement dating back to Palaeolithic times, 500,000 years ago. Henge monuments, barrows, and hill forts on the plateau are some of the most prominent	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	features of the area. The historical value of the area is incredibly rich, and important and includes 198 Listed Buildings and 169 Scheduled Monuments. Interest and participation in this subject is high, leading to previously unrecorded sites and features being recorded. Historic England have produced Lidar data for the Mendip Hills AONB and this is available on the website (https://historicengland.org.uk/research/methods/airborne-remote sensing/lidar/). In 2012 the AONB local authorities, with support from the AONB Partnership, digitised the areas Tithe Maps to make them accessible to assist understanding of the landscape. Climate change poses particular threats to the historic environment. Intense rainfall causes erosion of archaeological sites, and increased extremes of soaking and drying heighten risk of ground subsidence and accelerate the decay of stone work. Changes in vegetation patterns may cover and damage archaeological remains. An area experiencing many of these issues is Burrington Commons. The relevant historic environment objective of the Mendip Hills AONB Management Plan are as follows: H3 Promote appropriate management of sites, structures and landscapes designated for their international, national, regional or local importance in the historic environment to ensure no further loss of heritage assets.	
	Page 49 Landscape The Carboniferous Limestone that underlies much of the Mendip ridge has given the area its distinctive landscape of rolling hills, gorges, lines of drystone walls, and attractive stone, settlements on the spring line. The area has a tangible sense of tranquillity and remoteness which are highly valued by those who choose to live here and the many visitors. At the highest points, such as Black Down, areas of sandstone covered by heathland contrast with the limestone grassland and give variety to the landscape. Views out from the edge of the plateau and slopes are widely appreciated. The Mendip Hills AONB Landscape Assessment (Countryside Commission 1998) identified 11 distinctive character areas (see map, page 12 Mendip Hills AONB Management Plan 2019-2024). Consideration of the landscape needs to take account of the special qualities that make each of these character areas. In addition to this, Natural England National Character Area profiles that cover the AONB 141 Mendip Hills and 118 Bristol, Avon Valley and Ridges, need to be considered. Each profile includes a description of the natural and cultural features that shape these landscapes, current drivers for change, and as working documents they draw on current evidence and knowledge of these landscapes. There are many factors changing and bringing pressure on the Mendip Hills AONB landscape, these include development pressures, increase in road traffic and recreation, loss of dark sky, and the loss of landscape detail such as gruffy ground (remnants of shallow lead	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	mining), rock outcrops, and field boundaries. These need to be managed within and near the AONB boundary, to ensure that the essential character and its setting is conserved and enhanced. With reference to any development proposals in, or within the setting of the Mendip Hills AONB, the Mendip Hills AONB Partnership released our Dark Night Skies and Lighting Position Statement in December 2020 As dark night skies is a 'special quality' of the AONB we consider that any lighting (including site lighting) should be avoided in order to conserve and enhance dark night skies, ecology and natural beauty.	
	Page 59 Air Quality and Noise Transport infrastructure and increase in road users has potential to seriously impact on the special qualities of the AONB, in particular tranquillity, sense of remoteness and dark night skies, in addition to air quality. 25 Year Environment Plan - A Green Future: Our 25 Year Plan to Improve the Environment DEFRA (January 2018) The Plan sets out a long-term approach to protecting and enhancing a variety of natural landscapes and habitats, with goals of cleaner air and water, plants and animals which are thriving, and a cleaner, greener environment. The first line outlines the vision, *"It is this Government's ambition to leave our environment in a better state than we found it"* The National Planning Policy Framework 2021 (NPPF) sets out the Government's planning policies for England, and how these should be applied. Paragraph 176 of the NPPF sets out that; '*Great weight should be given to conserving, and enhancing landscape and scenic beauty in National Parks, the Broads, and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.'* Paragraph 177 states; *'…permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest…* *C0 any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated'* *Paragraph 185 states;* *'185. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative*	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	effects) of pollution on health, living conditions and the natural *environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:* *a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life65;* *b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and* *c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'*	
	Page 63 Climate Change and Flood Risk There is broad scientific consensus that the global climate is changing. However, the precise nature of these changes, and the consequent impacts on the special features of the AONB is complex and uncertain. Under climate change the Mendip Hills are likely to get warmer; summers will continue to get hotter and drier, and winters will continue to get milder and wetter, with inevitable exceptions. Climate change is likely to result in periods of heavy rain that may cause more frequent flood events from surface runoff, increased flooding of settlements at the foot of the hills, rock fall, soil erosion, and associated impacts on water quality.	Comment noted.
	Healthy Communities AONBs are uniquely placed to offer opportunities for mental and physical wellbeing. Of the 28 parishes wholly, or partly in the AONB, 17 had a population increase between the 2001 and 2011 census. Local increases are also mirrored by national growth in population. Public benefit through enjoyment of the hills is a significant objective of the Mendip Hills AONB Management Plan. Carefully managed access to attractive countryside, particularly walking, cycling, horse-riding and rock-sports brings physical and mental health benefits, enabling people to enjoy a beautiful landscape, reconnect with nature, and provide support to the local economy. Inappropriate levels, or types of activity can however impact on the natural capital, particularly landscape beauty, tranquillity, and biodiversity, of the AONB reducing others' ability to enjoy, and benefit from the area. Walking, cycling and horse-riding are popular activities, with several well-known recreational routes across the AONB including the Strawberry Line (National cycle route 26), Limestone Link, The Mendip Way, Monarchs Way, and West Country Way (National Cycle Route 3). The Mendip Hills AONB are also visited for their historical interest, and for the wild and tranquil areas that provide opportunity for quiet enjoyment including bird watching.	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	Conserving landscape and scenic beauty so that the Mendip Hills AONB continues to attract visitors is key for the local tourism economy. The need for economic growth and new development should not be at expense of landscape quality, and this has been recognised in the National Planning Policy Framework.	
	Page 79 Equalities The Mendip Hills AONB landscape is a resource to be enjoyed by all sectors of our diverse society, for active, and quieter recreational pursuits. Outdoor recreation is proved to benefit people's health and wellbeing through exercise, and opportunities to escape the pressure of everyday life. Being within a 30 minute drive from Bristol, Weston Super Mare, and Bath, the Mendip Hills AONB is accessible to these urban populations, as well as the local rural communities. The low level of public transport provision inhibits visiting much of the Mendip Hills for those without access to a car.	Comment noted.
Natural England Lead Advisor, response received 18th October 2021	Natural England advises that local transport strategies should take into account the importance of the following issues: • The protection and enhancement of the natural environment; • Climate change mitigation and adaptation; • Access to the natural environment; • Integrating Rights of Way Improvement Plans (RoWIPs); • Ensuring opportunities for delivering Green Infrastructure, that improves transport infrastructure asset resilience and reduces whole life costs, are embedded into the strategy.	Comment noted.
	Natural England considers that an environmentally sustainable transport system should protect and enhance the natural environment, as well as delivering economic and social benefits. Transport effects the natural environment and people's experience of it, in the following areas: • Biodiversity, landscape, geodiversity, and soils – through direct and indirect impacts from lands take and traffic. • Climate change and energy- through the consumption of fuel and generation of emissions. • Quality of life – through people's access to and experience of the natural environment and through links between walking, cycling, health and wellbeing.	Comment noted.
	Natural England has not reviewed the plans listed. However, we advise that the following types of plans relating to the natural environment should be considered where applicable to your plan area: • Green infrastructure strategies	Scoping information has been updated accordingly.

Consultee	Consultation response	How the response was considered and addressed
	• Biodiversity plans (these could include, for example, – the Cornwall Environmental Growth Strategy, the Nature Recovery Plans/Strategies being developed by each of the Local Nature Partnerships, and local biodiversity action plans) • Rights of Way Improvement Plans • Shoreline management plans • Coastal access plans • Marine Plans (including emerging Plans) • River basin management plans • AONB and National Park management plans • Relevant landscape plans and strategies (including Local Landscape Character Assessments).	
	The sources of evidence on the natural environment, listed at Annex A, may be useful in ensuring the transport strategy is evidence based, and assist in meeting Strategic Environmental Assessment (SEA) requirements. A range of additional locally specific evidence is also likely to be needed to underpin plan preparation.	Comment noted.
	Para 7.1 - It would be useful to indicate in this paragraph where a map showing the nationally protected landscapes can be found, i.e. Fig. 7-4 on page 57.	Scoping information has been updated accordingly.
	Para 7.17 - It would be useful to indicate in this paragraph where a map showing the NCAs can be found, i.e. Fig. 7-5 on page 58.	Scoping information has been updated accordingly.
	Para 9.8 - Given the length of coastline around the Peninsula, this list should include the risks associated with coastal change, e.g. accelerated erosion due to increased storminess and the resultant loss of habitat that can occur, especially where habitat migration is constrained by physical structures or inundation of coastal areas due to sea-level rise etc.	Updated, see **Appendix B**.
	We note, and welcome, that the list of key sustainability issues to be addressed acknowledges and includes: • The nature, scale, timing, and duration of some transport activities can result in the disturbance of species at a level that may substantially affect their behaviour, and consequently affect the long-term viability of their populations. This can include effects of poor air quality on designated sites, severance of ecological networks from transport corridors, and road kills. • The key issues preventing waterbodies from reaching good status are as follows: pollution from rural areas; pollution from abandoned mines; pollution from wastewater; physical modifications; changes to the natural flow and levels of water; and pollution from towns, cities, and transport. Poor management of surface water run-off from the road network is a key contributor to poor water quality in some locations.	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	• Undeveloped areas of the Peninsula are predominantly underlain by areas of Grade I, Grade 2, and Grade 3 agricultural land. The region therefore has the potential to contain some of the best and most versatile land for agricultural purposes. • The results of the 'Predictive BMV Land Assessment' for South West England provided by Natural England indicates that several undeveloped areas of land in the Peninsula region have a moderate or high likelihood of containing BMV land. • Approximately a quarter of the Peninsula region is designated as National Park (two in total), AONB (nine in total) or as a Heritage Coast area (17 in total). • Views across the region are also an important consideration in the planning process as the scale, height and mass of development can ultimately impact important views if they are not considered and assessed through the process. • Important areas for experiencing dark skies and tranquillity within the Peninsula region include Dartmoor National Park, Exmoor National Park and Bodmin Moor. • AQMAs within the Peninsula region have been primarily designated for exceedances in the annual mean concentration objective of 40µg/m3 for nitrogen dioxide (NO2). • In total, 13 of the 20 MRN corridors within the Peninsula pass through an AQMA. • Areas of noise concern within the Peninsula region broadly link to and follow the routes of the road network. • Road transport modes are the biggest overall emitters within the Peninsula region, with 69% of total transport emissions in 2016. Cars and LGVs were responsible for 54%, HGVs 12% and buses and coaches just 2%. • Resilience of the transport networks across the Peninsula region is critical, with the region's road and rail networks being particularly vulnerable to the impacts of coastal and inland flooding and the associated impacts of climate change. • Population growth continues to be high in the region. In the past 50 years, the population has grown at an average rate of nearly 8% per decade. • There are plans for nearly 200,000 new dwellings and more than 170,000 new jobs across the Peninsula Transport area in the period to 2040. • There is an existing network of green infrastructure in the Peninsula, including long distance walking and cycling routes such as the South West Coastal Path.	
	We note that the list does not make specific reference to: • Identifying the protected sites which are vulnerable to poor air quality. Whilst it is important to manage air quality to protect human health it is also important to manage air quality to protect habitats and species.	Updated, see **Section 2.3**.

Consultee	Consultation response	How the response was considered and addressed
	This information will need to link through to/from the HRA, but I think it is valuable to identify the problem areas in the SEA/IIA also.	
	The objectives and sub-objectives within the IIA Framework appear to be comprehensive, and we welcome the following objectives, and their associated sub-objectives: • Support the integrity of designated sites • Protect and enhance habitats and species • Increase habitat connectivity across the transport network • Minimise the impact which transport, and transport infrastructure has on water quality, associated biodiversity, and on the physical state of water bodies • Promote the efficient use of land • Protect and enhance the character and quality of the Peninsula's landscapes, townscapes, villagescapes and seascapes. • Deliver improvements in air quality in the Peninsula region • Reduce the impact on environmental noise from transportation sources • Support climate change mitigation across the Peninsula through limiting the contribution of transport to greenhouse gas emissions • Support the resilience of the Peninsula's transport networks to the potential effects of climate change • Improve the health and well-being of the Peninsula's residents	Comment noted.
	We would recommend, however, the following amendments or additions to the objectives: • The inclusion of an aim to avoid the compromise of the existing ecological network, and ensuring the opportunities for the future enhancement of habitat connectivity is not prejudiced. • The inclusion of an objective to protect and enhance soils. In addition, it is recommended that the sub-objective which states that the aim is to 'Avoid the development of the best…' is replaced with 'Avoid the loss of the best…'. It should also be noted that climate change is likely to have an adverse effect on the health of soils, which are a key natural capital asset. The conservation of healthy soils is key to the provision of food to support healthy lifestyles, in addition to the role they play in carbon storage, supporting biodiversity, water regulation and fuel provision. • Opportunities for the restoration of biodiversity, in addition to the 'protect and enhance' objectives and sub-objectives.	Updated, see **Section 2.3**.
	The Scoping Report does not suggest indicators for monitoring the strategy's performance. It is important that any monitoring indicators relate to the effects of the	Comment noted.

Consultee	Consultation response	How the response was considered and addressed
	strategy itself, not wider changes. Bespoke indicators should be chosen relating to the outcomes of the strategy. Whilst it is not Natural England's role to prescribe what indicators should be adopted, the following indicators may be appropriate: Biodiversity: • Number of transport projects that generate adverse impacts on sites of acknowledged biodiversity importance. • Percentage of transport projects generating overall biodiversity enhancement. • Hectares of biodiversity habitat delivered through transport projects. Landscape: • Amount of transport projects in or within the setting of National Parks, AONBs or Heritage Coast with commentary on likely impact. Green infrastructure: • Percentage of the Peninsula area's population having access to natural greenspace delivered through a transport project. • Length of greenways constructed.	

Appendix B Scoping information

B.1 Biodiversity

Summary of current baseline

International and European designated sites

The Convention on Wetlands of International Importance (the Ramsar Convention) is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. The convention was adopted in 1971 and came into force in 1975. In the UK, the initial emphasis was on selecting sites of importance to water birds, and consequently, many Ramsar Sites were also designated as Special Protection Areas (SPA) under the European Birds Directive (79/409/EEC). Special Areas of Conservation (SACs) are designated under the European Habitats Directive (92/43/EEC) for containing habitats and species listed in Annex I and II of the Directive.

In this respect, there are 53 International and/or European designated sites located wholly or partly within the Peninsula region, including three Ramsar sites, seven SPAs and 43 SACs (as follows):

Ramsar

- Severn Estuary;
- Somerset Levels and Moors; and
- Exe Estuary
- SPA
- Falmouth Bay to St Austell Bay;
- Marazion Marsh;
- Exe Estuary;
- East Devon Heaths;
- Severn Estuary;
- Tamar Estuaries Complex; and
- Somerset Levels and Moors.

SAC

- Quants;
- Culm Grasslands;
- Braunton Burrows;
- Lundy;
- Godrevy Head to St Agnes;
- Polruan to Polperro;
- Lower Bostraze and Leswidden;
- Carrine Common;
- Hestercombe House;
- Dawlish Warren;
- Exmoor and Quantock Oakwoods;
- Exmoor Heaths;
- Tintagel-Marsland-Clovelly Coast;
- Penhale Dunes;
- Phoenix United Mine and Crow’s Nest;
- Newlyn Downs;
- South Devon Shore Dock;
- Holme Moor and Clean Moor;

- The Lizard;
- Beer Quarry and Caves;
- Mendip Limestone Grasslands;
- Crowdy Marsh;
- North Somerset and Mendip Bats;
- Sidmouth to West Bay;
- Plymouth Sound and Estuaries;
- Fal and Helford;
- Mendip Woodlands;
- Dartmoor;
- Land's End and Cape Bank;
- Bristol Channel Approaches / Dynesfeydd Mor Hafren;
- Start Point to Plymouth South and Eddystone
- East Devon Pebblebed Heaths;
- Tregonning Hill;
- Severn Estuary;
- Mells Valley;
- St Austell Clay Pits;
- River Axe;
- South Hams;
- River Camel;
- South Dartmoor Woods;
- Breney Common and Goss and Tregoss Moors;
- Lyme Bay and Torbay;
- Lizard Point; and

Nationally designated sites

Sites of Special Scientific Interest (SSSI) are protected by law to conserve their wildlife or geology. Natural England is a statutory consultee on development proposals that might impact on SSSIs. There are 464 SSSIs located wholly or partly within the Peninsula region.

SSSI Impact Risk Zones (IRZ) are a GIS tool/dataset which maps zones around each SSSI according to the sensitivities of the features for which it is notified. They specify the types of development that have the potential to have adverse impacts at a given location. In this respect, many areas of the Peninsula region overlap with one or more SSSI IRZs for the types of development likely to come forward through the Peninsula Transport Strategy. The areas of the Peninsula region within IRZs can be viewed using the MAGIC Interactive Mapping Tool[5].

National Nature Reserves (NNRs) were established to protect some of England's most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Most NNRs offer great opportunities to schools, specialist interest groups and the public to experience wildlife at first hand and to learn more about nature conservation[6]. In this regard, there are 25 NNRs located wholly or partly within the Peninsula region, specifically:

- Berry Head;
- Dunkery and Horner Wood;
- Dendles Wood;
- Wistman's Wood;
- Golitha Falls;
- Westhay Moor;
- Tarr Steps Woodland;
- Black-a-Tor Copse;
- Slapton Key;
- Ham Wall;

[5] MAGIC (2020): 'Magic Interactive Mapping Tool', [online] available to access via:<http://www.magic.gov.uk/MagicMap.aspx>
[6] GOV.UK (2020): 'National Nature Reserves in England', [online] available to access via: <https://www.gov.uk/government/collections/national-nature-reserves-in-england>

- Hardington Moor;
- Huntspill River;
- Dunsdon;
- Bridgwater Bay;
- Axmouth to Lyme Regis Undercliffs;
- Rodney Stoke;
- East Dartmoor Woods and Heaths;
- Somerset Levels
- Hawkcombe Woods;
- Shapwick Heath;
- Dawlish Warren;
- Barrington Hill;
- Ebbor Gorge;
- The Lizard;
- Goss Moor; and

Marine Conservation Zones (MCZs) are areas that protect a range of nationally important, rare or threatened habitats and species within the 'blue belt' around the English Coast[7]. Since 2013, the UK Government has designated over fifty MCZs, including 20 located wholly or partly within the Peninsula region (as follows):

- Lundy;
- Upper Fowey and Pont Pill;
- Whitsand and Looe Bay;
- Mounts Bay;
- Newquay and the Gannel;
- Bideford to Foreland Point;
- Tamar Estuary Sites;
- Dart Estuary;
- Otter Estuary;
- Helford Estuary; and
- Padstow Bay and Surrounds;
- Skerries Bank and Surrounds;
- Runnel Stone (Land's End);
- Hartland Point to Tintagel;
- Torbay;
- The Manacles;
- Devon Avon Estuary;
- Erme Estuary;
- Axe Estuary;
- Camel Estuary

Locally important sites

Local Nature Reserves (LNRs) may be established by Local Authorities in consultation with Natural England under Section 21 of the National Parks and Access to the Countryside Act 1949 and are habitats of local importance. In this respect, there are 83 LNRs located wholly or partly within the Peninsula region.

Additional local designations within the Peninsula region include Local Wildlife Sites (LWS), Sites of Nature Conservation Interest (SNCI), County Wildlife Sites (CWS), Local Geological Sites (LGS) and Regionally Important Geological Sites (RIGS). The availability of information regarding these designations varies between local authority area, and it has not been possible to obtain all the relevant Geographical Information System (GIS) layers at this stage of the IIA process to provide a comprehensive location map of these features across the whole Peninsula region. However, two local authority areas within the Peninsula region have prepared online interactive mapping databases which are publicly accessible, specifically: Cornwall Council's Online Interactive Mapping Tool[8] and Devon County Council's Environmental Viewer[9]. The mapping layers available in these online databases

[7] GOV.UK (2016): 'Marine Conservation Zones', [online] available to access via: <https://www.gov.uk/government/collections/marine-conservation-zone-designations-in-england>
[8] Cornwall Council (2020): 'Interactive Map': https://map.cornwall.gov.uk/website/ccmap/
[9] Devon County Council (2020): 'Environmental Viewer': http://map.devon.gov.uk/dccviewer/

contain the location of these local designations which are otherwise difficult to source and will be essential sources of evidence during the subsequent stages of the IIA.

There are a variety of Biodiversity Action Plan (BAP) Priority Habitats located within or within proximity to the Peninsula region, primarily areas of deciduous woodland, ancient semi-natural woodland, coastal and floodplain grazing marsh, upland heathland, lowland heathland, grass moorland, blanket bog, and coastal sand dunes.

Environmental Records Centres for each local authority area contain records of protected or notable species within the Peninsula region. This includes records of several species of birds, mammals, bats, insects, grasses, trees, amphibians and reptiles; many of which are protected under the Wildlife and Countryside Act 1981 (as amended) and under Section 41 of the Natural Environment and Rural Communities Act 2006. In this respect, the BAP Priority Habitats and ecological designations within and surrounding the Peninsula region are likely to support populations of protected species.

Summary of future baseline

Habitats and species will potentially face increasing pressures from future development within the Peninsula region, with the potential for negative impacts on the wider ecological network. This may include a loss of habitats and impacts on biodiversity networks. The potential impacts on biodiversity from climate change are likely to include changes in habitat, changes in species distribution, changes in hydrology, changes in ecosystem functioning and a range of others.

Internationally and nationally designated sites are particularly sensitive to air quality issues and recreational pressures. Regarding air quality, exceeding critical values for air pollutants may result in changes to the chemical status of habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats. Additionally, the nature, scale, timing and duration of some human activities can result in the disturbance of species at a level that may substantially affect their behaviour, and consequently affect the long-term viability of their populations.

The Peninsula Transport Strategy presents an opportunity to maximise benefits for biodiversity by including consideration of important habitats, species, undesignated sites, and connections between designated sites and undesignated sites at a localised scale, and at an early stage of planning for future enhancements to transport infrastructure.

To maintain and improve the condition of biodiversity in the future, it will be important to not only protect and enhance important habitats but the connections between them, in addition to delivering net gains through new development areas. It will be crucial to effectively coordinate the delivery of new infrastructure to ensure that opportunities to improve green infrastructure and ecological corridors are maximised within the Peninsula region and in the surrounding areas.

B.2 Water and soil resources

Baseline summary

Water resources

The water resources located within and within proximity to the Peninsula region include a network of main rivers, small streams and brooks, along with several drainage ditches and small pools located within and adjacent to field margins (including the King Sedgemoor Drain within the Somerset Levels). Main rivers include (but are not limited to) the Tamar, Exe, Fal, Camel, Taw, Parrett, Teign, Dart, Avon, Erme, Yealm, Lynher, Fowey, Axe, and Yeo.

The Peninsula region is located within the South West River Basin District, which covers over 21,000km^2. The District includes Cornwall (including the Isles of Scilly), Devon (including Lundy Island), Dorset and parts of Somerset, Hampshire and Wiltshire. A summary of the River Basin District is provided below in **Table B.2.1** and **Table B.2.2**.

Table B.2.1: Waterbodies within the South West River Basin District

Water body categories	Natural	Artificial	Heavily modified	Total
River, canals and surface water transfers	521	21	48	590
Lake	9	33	19	61
Coastal	21	0	2	23
Estuarine	11	0	12	23
Groundwater	42	0	0	42
Total	**604**	**54**	**81**	**739**

Table B.2.2: Ecological and Chemical water quality status for watercourses in the South West River Basin District (based on 2019 results)

	Ecological status or potential					Chemical status	
Number of water bodies	Bad	Poor	Moderate	Good	High	Fail	Good
697	10	105	435	147	0	697	0

The Environment Agency's Catchment Data Explorer[10] also classifies the reasons for not achieving good status (RNAGs) and the reasons for deterioration (RFD) for the waterbodies in the South West River Basin District, shown overleaf in **Table B.2.3** below**.** In this respect, the three sectors which have the biggest proportion of RNAGs attributed to them are the agricultural and land management sector, water industry sector, and the mining and quarrying sector.

The key issues preventing waterbodies from reaching good status are as follows: pollution from rural areas; pollution from abandoned mines; pollution from wastewater; physical modifications; changes to the natural flow and levels of water; and pollution from towns, cities and transport.

Table B.2.3: RNAGs and RFDs for waterbodies within the South West River Basin District

Sector	RFD	RNAG	Grand Total
Agriculture and rural land management	2	1223	1225
Domestic General Public	0	53	53
Industry	0	58	58
Local and Central Government	0	43	43
Mining and Quarrying	0	227	227

[10] Environment Agency (2020): South West River Basin District – Summary': https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/8/Summary

Navigation	0	4	4
No sector responsible	7	342	349
Other	0	80	80
Recreation	0	6	6
Sector under investigation	0	89	89
Urban and transport	0	97	97
Waste treatment and disposal	0	13	13
Water Industry	2	547	549
Grand Total	**11**	**2782**	**2793**

Soil resources

The Agricultural Land Classification (ALC) classifies land into six grades (plus 'non-agricultural land' and 'urban'), where Grades 1 to 3a are recognised as being the 'best and most versatile' (BMV) land and Grades 3b to 5 of poorer quality. In this context, there is a need to avoid loss of higher quality 'best and most versatile' agricultural land.

In terms of the location of the best and most versatile agricultural land, a detailed classification has not been undertaken for most areas of undeveloped land in the Peninsula region. The provisional ALC dataset provided by Natural England[11] indicates that the undeveloped areas of the Peninsula are predominantly underlain by areas of Grade 1, Grade 2 and Grade 3 agricultural land. The region therefore has the potential to contain some of the best and most versatile land for agricultural purposes.

However, in the absence of a detailed ALC assessment it is currently not possible to determine whether the Grade 3 areas can be classified as Grade 3a (i.e. best and most versatile land) or Grade 3b land.

The results of the 'Predictive Best and Most Versatile (BMV) Land Assessment' for South West England provided by Natural England indicates that several undeveloped areas of land in the Peninsula region have a moderate or high likelihood of containing BMV land. Nevertheless, it is also important to note that the national dataset is of very low resolution and may not necessarily provide an accurate reflection of the agricultural land quality within the Peninsula region.

Mineral resources

Mineral resources are defined as natural concentrations of minerals or, in the case of aggregates, bodies of rock that are, or may become, of potential economic interest due to their inherent properties. They make an essential contribution to the country's prosperity and quality of life. Since minerals are a non-renewable resource, minerals safeguarding is the process of ensuring that non-minerals development does not needlessly prevent the future extraction of mineral resources, of local and national importance[12].

Minerals and Waste Local Plans for each local authority area show the location of Minerals Safeguarding Areas across the Peninsula region. The availability of information regarding these designations varies between local authority area, and it has not been possible to obtain the relevant Geographical Information System (GIS) layers at this stage of the IIA process to provide a comprehensive location map of these areas across the whole Peninsula region.

[11] Natural England (2011): 'Regional ALC Classification Map for East Midlands', [online] available to access via: <http://publications.naturalengland.org.uk/publication/143027?category=5954148537204736>
[12] GOV.UK (2014): 'Minerals Guidance', [online] available to access via: <https://www.gov.uk/guidance/minerals>

Summary of future baseline

Quality of surface waters is likely to improve slowly, in line with measures in the South West River Basin Management Plan. However, population growth in most areas, development and climate change is likely to increase pressure on WFD objectives and water resources. Climate change could increase flooding which could lead to adverse effects on water quality from overflowing of storm water drains and leaching of contaminated soils into surface waters.

Due to the prevalence of BMV agricultural land within sections of the undeveloped areas of the Peninsula region, new transport infrastructure located outside of the settlement boundaries will likely lead to losses of higher quality (best and most versatile) agricultural land.

B.3 Historic environment

Summary of current baseline

Designated heritage assets and areas

The historic environment is protected through the planning system, via conditions imposed on developers and other mechanisms. Historic England is the statutory consultee for certain categories of listed building consent and all applications for scheduled monument consent.

World Heritage Sites

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Sites are places, monuments or buildings which have been recognised as of "outstanding universal value" to humanity. There are two such World Heritage Sites within the region: the 'Cornwall and West Devon Mining Landscape' and the 'Jurassic Coast'.

The Cornwall and West Devon Mining Landscape was inscribed as a UNESCO World Heritage Site in 2006, encompassing ten areas within the region with significant mining heritage. Much of the landscape of Cornwall and West Devon was transformed in the 18th and early 19th century as a result of the rapid growth of pioneering copper and tin mining. The Outstanding Universal Value of the WHS is a reflection of both the integrity and authenticity of the area, and is determined based on the following criterion:

- Exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design;
- Bear a unique or at least an exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared; and
- Be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant change(s) in human history.

The ten areas of the World Heritage Site within Cornwall are as follows:

- Camborne & Redruth with Portreath;
- Caradon Mining District;
- Gwennap, Kennall Vale and Perran Foundry;
- Luxulyan Valley & Charlestown;
- Port of Hayle;
- St Agnes Mining District;
- St Just Mining District;

- Tamar Valley & Tavistock;
- Tregonning and Trewavas Mining District; and
- Wendron Mining District.

The Jurassic Coast stretches from Exmouth in East Devon to Studland Bay in Dorset. Inscribed by UNESCO in 2001, the Jurassic Coast is the only natural WHS in England due to its outstanding rocks, fossils and landforms. A brief summary of the Outstanding Universal Value of the WHS is presented below[13]:

"The coastal exposures along the Dorset and East Devon coast provide an almost continuous sequence of Triassic, Jurassic and Cretaceous rock formations spanning the Mesozoic Era and document approximately 185 million years of Earth's history.

"The site includes a range of globally significant fossil localities - both vertebrate and invertebrate, marine and terrestrial - which have produced well preserved and diverse evidence of life during Mesozoic times. It also contains textbook exemplars of coastal geomorphological features, landforms and processes.

"Renowned for its contribution to Earth science investigations for over 300 years, the Dorset and East Devon coast has helped foster major contributions to many aspects of geology, palaeontology and geomorphology and has continuing significance as a high quality teaching, training and research resource for the Earth sciences."

Listed buildings

Listed building are nationally designated buildings which are protected through the Listed Buildings and Conservation Areas Act 1990.[14]

According to the National Heritage List for England, the Peninsula region contains 957 Grade I listed buildings, 2,613 Grade II* listed buildings and 41,606 Grade II listed buildings, shown below in **Table B.3.1.**[15]

Table B.3.1: Listed buildings within the Peninsula region

Listed Building	Total Number in each Local Authority				
	Cornwall	Plymouth	Devon	Torbay	Somerset
Grade I	219	25	397	6	310
Grade II*	585	95	1,116	29	788
Grade II	11,790	672	17,665	830	10,649

Scheduled monuments

The Ancient Monuments and Archaeological Areas Act (1979) allows the investigation, presentation and recording of matters of archaeological or historical interest and makes provision for the regulation of operations or activities which may affect ancient monuments and archaeological areas. Scheduled monuments are nationally designated sites which are protected under the Act. In this regard, there are 3,748 scheduled monuments within the Peninsula region, as follows: Cornwall (1,348), Plymouth (34), Devon (1,742), Torbay (13), Somerset (611).

[13] Jurassic Coast Trust (2020): 'Outstanding Universal Value': https://jurassiccoast.org/documents/statement-of-outstanding-universal-value/
[14] Planning (Listed Buildings and Conservation Areas) Act (1990) [online] available at: https://www.legislation.gov.uk/ukpga/1990/9/contents
[15] Historic England (2020): National Heritage List for England', [online] available to access via: <https://historicengland.org.uk/listing/the-list/advanced-search>

Registered historic parks and gardens and battlefields

Historic England's 'Register of Parks and Gardens of Special Historic Interest in England', established in 1983, currently identifies over 1,600 sites assessed to be of significance. There are 133 registered parks and gardens present in the Peninsula region.

Historic England's Register of Historic Battlefields identifies important English battlefields. Its purpose is to offer them protection through the planning system, and to promote a better understanding of their significance and public enjoyment. There are six historic battlefields within the Peninsula region, namely:

- Battle of Braddock Down 1643;
- Battle of Langport 1645;
- Battle of Sedgemoor 1685;
- Battle of Stratton 1643;
- Battle of Lostwithiel 21 August 1644; and
- Battle of Lostwithiel 31 August – 1 September 1644.

Conservation areas

Conservation areas are designated because of their special architectural and historic interest. Conservation area appraisals are a tool to demonstrate the area's special interest, explaining the reasons for designation and providing a greater understanding and articulation of its character - mentioned within the 'Conservation Area Designation, Appraisal and Management' advice note by Historic England[16].

In this regard, there are 717 conservation areas across the Peninsula region, including 145 in Cornwall, 15 in Plymouth, 326 in Devon, 24 in Torbay, and 207 in Somerset. This is shown in greater detail in **Table B.3.2** below.

Table B.3.2: Conservation Areas within the Peninsula region

Local Authority	Total number of Conservation Areas
Cornwall TOTAL	**145**
Dartmoor National Park	25
East Devon	33
Exeter	20
Exmoor National Park	16
Mid Devon	51
North Devon	41
South Hams	46
Teignbridge	35
Torridge	20

[16] Historic England (2016): 'Conservation Area Designation, Appraisal and Management Advice Note 1', [online] available to access via: <https://www.historicengland.org.uk/images-books/publications/conservation-area-designation-appraisal-management-advice-note-1/>

West Devon	39
Devon TOTAL	**326**
Plymouth TOTAL	**15**
Torbay TOTAL	**24**
Mendip	27
Sedgemoor	14
Somerset West and Taunton	52
South Somerset	88
North Somerset	26
Somerset TOTAL	**207**

The conservation area appraisals and management plans, alongside any supporting documentation (including character area descriptions, boundary maps, and the location of key views) are accessible to download via the local authority websites.

Protected Wrecks

The Protection of Wrecks Act 1973 allows the Secretary of State to designate a restricted area around a wreck to prevent uncontrolled interference. These protected areas are likely to contain the remains of a vessel, or its contents, which are of historical, artistic or archaeological importance[17]. In this regard, there are nine Protected Wrecks within the Peninsula region, including: Rill Cove, Schiedam, Church Rocks, Cattewater, Royal Anne, Coronation Inshore, Erme Estuary, Hanover, and Low Bar Wreck.

Locally important heritage features

It should be noted that not all the area's historic environment features are subject to statutory designations, and non-designated heritage assets comprise a large part of what people have contact with as part of daily life – whether at home, work or leisure. Although not designated, many buildings and areas are of historic interest and are important by local communities. For example, open spaces and key distinctive buildings are likely to have a local historic value.

The Historic Environmental Records (HER) for each local authority area identify the important distinctive structures or features that positively contribute to the local distinctiveness and sense of place of the Peninsula region. In total, eight HERs which cover the Peninsula region, as follows[18]:

- Cornwall and Scilly HER;
- Dartmoor National Park HER;
- Plymouth HER;
- Devon (including Torbay) HER;
- Exeter City HER;
- Exmoor National Park HER;

[17] Historic England (2020): 'Protected Wreck Sites': https://historicengland.org.uk/listing/what-is-designation/protected-wreck-sites/
[18] Heritage Gateway (2020): 'South West HER List': https://www.heritagegateway.org.uk/gateway/chr/default.aspx

- Somerset HER; and
- North Somerset HER.

During the subsequent stages of the IIA process, the HERs will be reviewed in greater detail to determine the potential impacts to non-designated heritage features resulting from the provisions within the Peninsula Transport Strategy.

Heritage at risk

Since 2008, Historic England has released an annual Heritage at Risk Register. The Heritage at Risk Register highlights the Grade I and Grade II* listed buildings, scheduled monuments, historic parks and gardens, registered battlefields, wreck sites and conservation areas deemed to be 'at risk'. According to the 2020 Heritage at Risk Register for South West England[19], there are 805 heritage assets at risk across the Peninsula region (see **Table B.3.3** below for more details).

Table B.3.3: Heritage assets at risk within the Peninsula region (by local authority area)

Heritage Asset Type	Total Number at Risk in the Peninsula region				
	Cornwall	Plymouth	Devon	Torbay	Somerset
Buildings and Structures	44	14	33	4	25
Places of Worship	19	1	45	2	39
Archaeology	184	11	298	2	67
Parks and Gardens	1	0	3	2	4
Battlefields	0	0	0	0	0
Wreck Site	0	0	0	0	0
Conservation Areas	1	0	5	0	1

It is important to recognise that the Heritage at Risk Registers for areas outside of London do not contain information about the status of Grade II listed buildings. As such, it is currently not possible to determine whether any of the Grade II listed buildings within the Peninsula region are at risk.

Summary of Future Baseline

New infrastructure provision within the Peninsula region has the potential to impact on the fabric and setting of heritage assets; for example, through inappropriate design and layout. It should be noted, however, that existing historic environment designations offer a degree of protection to heritage assets and their settings, and there are a range of existing initiatives to enhance the historic environment of the Peninsula region.

Increasing traffic levels associated with an increase in population has the potential to negatively impact heritage assets. In urban areas, this can be from vibration affecting the structural integrity of vulnerable buildings, emissions, and from the provision of street furniture affecting the setting of assets. Harm can also be caused to the significance of heritage assets and their settings and the experience of being in an historic townscape,

[19] Historic England (2020): 'Heritage at Risk Register for South West England, [online] available to access via: https://historicengland.org.uk/images-books/publications/har-2020-registers/

landscape or seascape due to noise and air quality, as well as from the visibility of infrastructure and traffic.

New development need not however be harmful to the significance of a heritage asset, and in the context of the Peninsula Transport Strategy there may be opportunity for new transport infrastructure to enhance the historic settings of localities and better reveal assets' heritage significance. New transport infrastructure also has the potential to improve public access to, and enjoyment of, heritage assets.

It is also recognised that the Peninsula Transport Strategy has the potential to establish cross-cutting provisions relating to development. This has the potential to include the creation and enhancement of functional environmental infrastructure, ecosystem services and biodiversity, providing appropriate buffers to natural spaces and restoring and enhancing connectivity. In this context, improving the resilience of such networks is further likely to protect the historic environment, protecting important views and/ or the setting of designated and non-designated assets, in addition to the wider character of key historic settlements within the Peninsula region.

B.4 Landscape

Summary of current baseline

Nationally protected landscapes

The South West Peninsula is a geographically large area of nearly 14,500 km^2 spanning the authorities of Cornwall, Devon, Somerset, Plymouth and Torbay. Approximately a quarter of the region is designated as National Park, Area of Outstanding Natural Beauty (AONB) or as a Heritage Coast area.

National Parks

National Parks are designated by Natural England under the provisions of The National Parks and Access to the Countryside Act, 1949, and have two statutory purposes:

- To conserve and enhance their natural beauty, wildlife and cultural heritage; and
- To promote opportunities for the public understanding and enjoyment of these special qualities.

Designated in 1951, Dartmoor National Park covers an area of approximately 954km^2 across South Devon and is an extensive, unsettled moorland with broad ridges, expansive panoramic views and an overwhelming sense of wilderness. Hardy sheep, cattle and ponies, including the Dartmoor Pony, freely graze. It is a landscape unified by granite, reflected in ancient monuments, stone walls, tors, bridges and settlements.

Designated in 1954, Exmoor National Park covers an area of approximately 692km^2 across North Devon and North Somerset. The National Park is a distinct and diverse landscape of softly rounded hills and ridges, with heather and grass moors, spectacular coast, deeply incised wooded valleys, high sea cliffs, fast flowing streams, traditional upland farms and characteristic beech hedgebanks. Additionally, large areas of moorland provide a sense of tranquillity and remoteness.

Areas of Outstanding Natural Beauty

The Countryside and Rights of Way (CRoW) Act 2000 confirms the significance of AONBs. Section 85 places a statutory (legal) duty on all relevant authorities to have regard to the purpose of conserving and enhancing natural beauty when discharging any function in relation to or affecting land within an AONB. In this context, there are nine AONBs located wholly or partly within the Peninsula region, namely:

- Tamar Valley;

- East Devon;
- Mendip Hills;
- North Devon Coast;
- Quantock Hills;
- South Devon;
- Blackdown Hills;
- Cornwall; and
- Cranborne Chase and West Wiltshire Downs.

An overview of each AONB is provided below, with the text lifted from the Management Plans for each AONB (as referenced in the 'Planning Policy Context' section of this IIA Scoping Report – see Chapter 3).

Designated in 1995, the Tamar Valley AONB is 190km^2 and covers rivers, estuaries, and countryside. Located across the border between Devon and Cornwall, the AONB shares a boundary with Dartmoor National Park in the east and stretches as far north as Dunterton. The AONB is managed by a Partnership Committee, made up of local and national organisations, and community representatives. As set out in the 2019- 2024 Management Plan (2019), this diverse landscape is shaped by the rivers Tamar, Tavy and Lynher, and by the human activities focussed around them.

Designated in 1963, the East Devon AONB covers 268km^2 which is approximately 32% of the East Devon District. The AONB is notable for its varied and dramatic coastal scenery and the grandeur of sheer red sandstone cliffs. Intimate wooded combes and coves contrast with the stark, white chalk outcrop that punctuates the coast at Beer Head and further east, the wilderness of the undercliffs. Its special qualities do not stop at the coast. Inland, the heathland commons provide high, open and remote plateaux. Important recreationally, the heathland habitat is valuable for its flora and fauna and contrasts sharply with the lower undulating agricultural mosaic of small fields, hedgerows and woodland copse.

Designated in 1972 and rising from the Somerset Levels, the Mendip Hills AONB covers 198km^2 and is characterised by the following special qualities: the dark skies, tranquillity, sense of remoteness and naturalness of the area; the distinctive limestone ridges and scarp slopes; the panoramic views across to the Severn Estuary and to Wales; the diverse geology ranging from Devonian to Jurassic exposures (including Cheddar Gorge); and the caves for their wildlife, geological, and archaeological importance.

Designated in 1959, the North Devon Coast AONB covers approximately 171km^2 of mainly coastal landscape including special places such as Combe Martin, Lee Bay, Woolacombe, Croyde, Saunton, Braunton Burrows, Northam Burrows Country Park, Westward Ho!'s Pebble Ridge and the Hartland Peninsula. The extensive, mobile, dune system at Braunton Burrows has an immense diversity of wildlife and lies at the heart of the AONB. The coast has a wide diversity of scenery, with tall rugged cliffs and wave-cut platforms contrasting with wide, sandy bays and sand dunes. In the north, steeply dipping rocks form hogsback cliffs at varied heights in a natural continuation of Exmoor's coastline. To the south, facing the full force of the Atlantic, sheer crags and razor-like reefs present the coast at its most rugged and beautiful.

Designated in 1956, the Quantock Hills AONB covers approximately 98km^2 of upland plateau, upland oak woods, hedged farmland and heathland. The Quantocks comprise one of the few remaining moorland landscapes in southern Britain of national importance for the legible survival of monuments dating from the Neolithic and especially the Bronze Age. These include numerous cairns resulting from land clearance and bowl barrows dating from around 2400 – 1500 BC, along with large-scale dramatic examples of Iron Age hill forts and smaller defended enclosures such as Dowsborough Hillfort and Ruborough Camp.

Designated in 1960, the South Devon AONB covers approximately 337km^2 of rugged cliffs, sandy coves, peaceful countryside, picturesque villages, rolling hills, wooded valleys, colourful hedge banks, and secretive estuaries. It is an ancient countryside with strong links to the sea and generations of human activity woven into the landscape.

Designated in 1991, the Blackdown Hills AONB covers 370km^2 and are a distinctive, diverse rural landscape. The Hills stretch from the prominent scarp above the M5 in the north to Honiton and Axminster in the south, and from Chard in the east to Culmstock in the west. Ranging from around 50 to 310 metres above sea level, the area is characterised by a sense of relative remoteness and tranquillity. From the dramatic, steep, wooded north-facing scarp, the area dips gently southwards as a flat-topped plateau deeply dissected by valleys.

Designated in 1959, the Cornwall AONB covers 958km^2 of land which equates to approximately 27% of the total area of the county. The AONB comprises twelve local areas within Cornwall: Hartland, Pentire Point to Widemouth, The Camel Estuary (which became part of the AONB in 1981), Carnewas to Stepper Point, St Agnes, Godrevy to Portreath, West Penwith, South Coast Western, South Coast Central, Rame Head, and Bodmin Moor.

Designated in 1981, the Cranborne Chase and West Wiltshire Downs AONB extends over 981 km^2 of countryside, overlapping the boundaries of Wiltshire, Dorset, Hampshire and Somerset. It is a diverse landscape offering areas of rolling chalk grassland, ancient woodlands, chalk escarpments, downland hillsides and chalk river valleys each with a distinct and recognisable character.

Heritage Coast

Heritage Coasts are the finest stretches or undeveloped coastline in England and Wales, with their natural beauty and enjoyment by the public giving them special claim for both protection and sensitive management. In this context, there are 17 Heritage Coasts surrounding the Peninsula region, specifically:

- East Devon;
- Godrevy – Portreath;
- Hartland (Cornwall);
- Lundy;
- Pentire Point – Widemouth;
- Rame Head;
- St Agnes;
- The Roseland;
- West Dorset
- Exmoor;
- Gribbin Head – Polperro;
- Hartland (Devon);
- North Devon;
- Penwith;
- South Devon;
- The Lizard;
- Trevose Head; and

National Character Areas

National Character Areas (NCAs) are landscape areas which share similar characteristics, following natural lines in the landscape rather than administrative boundaries. In this respect, there are 23 NCAs located wholly or partly within the Peninsula region, specifically:

- Quantock Hills;
- Vale of Taunton and Quantock Fringes;
- Devon Redlands;
- Hensbarrow;
- Exmoor;
- Blackdowns;
- The Culm;
- Carnmenellis;

- West Penwith;
- Lundy;
- Avon Vales;
- Mendip Hills;
- Blackmoor Vale and Vale of Wardour;
- Yeovil Scarplands;
- South Devon;
- Bodmin Moor
- The Lizard;
- Cotswolds;
- Bristol, Avon Valleys and Ridges;
- Somerset Levels and Moors;
- Mid Somerset Hills;
- Dartmoor;
- Cornish Killas; and

Local Landscape Character

Landscape character plays an important part in understanding the relationship between people and place, identifying recognisable and distinct patterns in the landscape which make one area different from another. Landscape character can assist in the assessment of the likely significance of effects of change resulting from development and the value of landscape, both in visual and amenity terms. Assessments often provide indications of the overall landscape sensitivity and landscape capacities for key areas within the regions.

Completed in 2007, the 'Cornwall and Isles of Scilly Landscape Character Study'[20] provides information about the Landscape Character Areas (LCA) within the region. The Study also provides information about the evolution of the LCAs and how they have been formed, influenced and changed over time. The results of the Study identified 40 LCAs within Cornwall.

The main inland upland areas in Cornwall are a series of granitic intrusions that form distinctive moorlands (open heathlands). A geologically recent rise of sea level resulted in the drowned river valleys, or rias, of southern Cornwall, including the Tamar, Fowey, and Fal estuaries. The effect of the rias, combined with the variety of rocks, is an attractive coastal landscape that is subject to increasing pressures by the demands of recreation and tourism. Long stretches of the coast are now owned by the National Trust or are otherwise protected from commercial development[21]. Adopted in June 2011, Cornwall Council's best practice guidance[22] provides a framework for future planning and management policies for landscape character.

Devon's Landscape Character Assessment (DLCA) describes the variations in character between different areas and types of landscape in the county. It provides an evidence base for local development frameworks and plans, articulating what people perceive as distinctive and special about all landscapes in Devon (including Plymouth and Torbay). Additionally, it also sets out strategies and guidelines for the protection, management and planning of the landscape[23]. The results of the assessment identify 37 landscape character types (LCTs).

[20] Cornwall Council (2017): 'Landscape Character Assessment', [online] available to access via: <https://www.cornwall.gov.uk/environment-and-planning/cornwalls-landscape/landscape-character-assessment/>
[21] Britannica (2020): 'Cornwall': https://www.britannica.com/place/Cornwall-unitary-authority-England
[22] Cornwall Council (2011): 'Best Practice Guidance for Landscape Character', [online] available to access via: https://www.cornwallhousing.org.uk/media/3627266/landscape_best_practice_aug_2011_full-version-webpdf.pdf
[23] Devon County Council (2018): 'Devon Landscape Character Assessment': https://www.devon.gov.uk/planning/planning-policies/landscape/devons-landscape-character-assessment

Within Somerset, landscape character assessments have been completed for the districts of West Somerset[24], Taunton Deane[25], South Somerset[26], North Somerset[27], Mendip[28], and Sedgemoor[29]. These assessments will provide a useful reference base for the subsequent stages of the IIA process. It is currently not possible to access a comprehensive GIS mapping layer showing the character areas and types across the whole of Somerset.

Tree Preservation Orders

Implemented by local planning authorities, Tree Preservation Orders (TPOs) are designated to protect specific trees, groups of trees or woodlands in the interests of their amenity value. When considering 'amenity; the local planning authority will likely take into consideration the following criteria[30]:

- Visibility: the extent to which the trees or woodlands can be seen by the public; and
- Individual, collective and wider impact: considering the importance of the trees or woodlands in relation to their cultural or historic value, contribution to and relationship with the landscape and/or their contribution to the character or appearance of a conservation area.

In this context, the local authorities within the Peninsula region have designated a significant number of TPOs in the interest of their amenity value, including many within and adjacent to the built-up areas of the region.

Visual amenity

It is useful to note that the views across the region are also an important consideration in the planning process as the scale, height and mass of development can ultimately impact important views if they are not considered and assessed through the process. Changes due to both development and landscape manipulation can see these views degraded over time.

Tranquillity and dark skies

Tranquillity is a natural resource, and an essential quality of the countryside. It is a much valued aspect of human experience that the Campaign to Protect Rural England (CPRE) has long championed[31]. As highlighted by CPRE, although found in many places, it is the countryside that gives us the best chance to experience it. With its broad views, woodlands and heaths, wildlife, the sounds of nature, massive skies, and open water, the rural environment offers us many opportunities to experience deep tranquillity. It enables us to appreciate the beauty and harmony of the natural world. Tranquillity is a central part of why the countryside matters deeply to so many people and the reason many want to spend time there.[32]

Dark skies are also an essential component of tranquillity, contributing to a feeling of remoteness and providing a sense of wilderness, wonder and intrigue. Artificial light doesn't

[24] West Somerset District Council (1999): 'West Somerset Landscape Character Assessment': https://www.somersetwestandtaunton.gov.uk/media/1224/west-somerset-landscape-character-assessment-1999.pdf
[25] Taunton Deane Borough Council (2011): 'Taunton Deane Landscape Character Assessment': https://www.somersetwestandtaunton.gov.uk/media/1343/taunton-deane-landscape-character-assessment.pdf
[26] South Somerset District Council (1993): 'The Landscape of South Somerset': https://www.southsomerset.gov.uk/services/planning/planning-technical-zone/heritage-conservation-landscape-and-archaelogy/landscape-architecture-and-our-local-landscape/
[27] North Somerset District Council (2018): 'North Somerset Landscape Character Assessment': https://n-somerset.inconsult.uk/consult.ti/LCA_update_2018/consultationHome
[28] Mendip District Council (2020): 'Mendip Landscape Character Assessment': https://www.mendip.gov.uk/article/7785/Landscape-and-Environment
[29] Sedgemoor District Council (1996): 'Landscape Assessment and Countryside Design Summary': https://www.sedgemoor.gov.uk/article/1216/Landscape-Assessment-and-Countryside-Design-Summary
[30] GOV.UK (2014): 'Tree Preservation Orders – General', [online] available to access via: <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>
[31] Campaign to Protect Rural England (2015): 'Give Peace a Chance', [online] available to access via: <https://www.cpre.org.uk/resources/give-peace-a-chance/>
[32] Campaign to Protect Rural England (2019): 'Why we are working for starry, starry skies', [online] available to access via: <https://www.cpre.org.uk/news/why-were-working-for-starry-starry-skies/>

respect boundaries. It can spread for miles, bleeding out from built-up areas and into the skies over our countryside. Remarkable tranquillity that comes with clear, velvety skies speckled with stars is a spectacle, and should be protected for everyone to enjoy[33]. Important areas for experiencing dark skies within the Peninsula region include Dartmoor National Park, Exmoor National Park and Bodmin Moor.

Summary of Future Baseline

New infrastructure provision across the Peninsula region has the potential to lead to incremental but small changes in landscape, townscape and villagescape character and quality. This includes from the loss of landscape features and areas with an important visual amenity value. Increasing traffic levels associated with an increase in population also has the potential to negatively impact landscape character and tranquillity.

B.5 Air quality and noise

Summary of current baseline

Air Quality Management Areas

Local authorities are required to monitor air quality across the county under Section 82 of the Environment Act (1995), report regularly to Defra and act where nationally set levels are likely to be exceeded. Monitoring is undertaken to assess levels of nitrogen dioxide, sulphur dioxide, ozone, benzene and particulates. Where exceedances exist, areas are declared as Air Quality Management Areas (AQMAs), with local authorities required to produce Action Plans (AQAP) which describe the measures that the local authority intend to take to improve local air quality.

AQMAs within the Peninsula region have been primarily designated for exceedances in the annual mean concentration objective of 40µg/m^3 for nitrogen dioxide (NO_2). In total, 13 of the 20 major road network (MRN) corridors within the Peninsula pass through an AQMA designated for having exceedances in the national and/or annual mean objective concentrations for Nitrogen Dioxide (NO_2), as follows:

- The ‘A390 Truro’ MRN corridor passes through the Truro AQMA;
- The ‘A390 Truro to Falmouth’ MRN corridor passes through the Truro AQMA;
- The ‘A391 St Austell’ MRN corridor passes through the St Austell AQMA at the southern end of the corridor;
- The ‘A39 Atlantic Highway’ MRN corridor passes through the Camelford AQMA;
- Sections of the ‘A374/A386/A3064 Plymouth’ MRN corridor are designated as AQMAs;
- The ‘A385 Totnes, Paignton’ MRN corridor passes through the Totnes AQMA;
- The ‘A380 Exeter to Torbay’ MRN corridor runs parallel to the Kingskerswell AQMA (overlapping on the approach to Penn Inn Roundabout) and passes close to the Newton Abbot AQMA;
- The ‘A382 Newton Abbot’ MRN corridor passes through the Newton Abbot AQMA;
- The ‘A379 Exeter’ MRN corridor crosses the Exeter AQMA at Countess Wear Junction;
- The ‘A38 Wellington to Bridgwater’ passes through the East Reach AQMA in Taunton;
- The ‘A358 Taunton to A303 Link’ MRN corridor passes through the Henlade AQMA;

[33] Campaign to Protect Rural England (2019): ‘Why we are working for starry, starry skies’, [online] available to access via: <https://www.cpre.org.uk/news/why-were-working-for-starry-starry-skies/>

- The 'A3088/A37 Yeovil to Dorchester' MRN corridor passes through the Yeovil AQMA; and
- The 'A37 Bristol to A303 via Shepton Mallet' MRN corridor is within proximity to an AQMA just to the north of the Somerset boundary.

Noise Pollution

Areas in the peninsula which experience the highest levels of noise pollution are broadly linked to, and follow the routes of, the road network.

Summary of Future Baseline

Future infrastructure provision has the potential to increase the amount of traffic on the key routes through the Peninsula region, with the potential for increasing pollutants. Cleaner vehicles, including the update of electric vehicles have the potential to lead to improvements in air quality over the longer term. The implementation of EV charging points across the region will likely lead to positive effects in terms of addressing EV challenges, including through increasing public confidence in charging infrastructure. Improvements to future air quality are dependent, in part, on whether the measures within AQAPs are successfully implemented. The Peninsula Transport Strategy's priorities are to continue to promote cleaner air to residents and businesses and working with partners to improve levels of active travel, public transport use and other alternatives to the private car.

B.6 Climate change and flood risk

Summary of current baseline

Contribution to climate change

All five of the unitary and county authorities represented within the Peninsula region declared Climate Emergencies in 2019 and are developing policies and action plans to accelerate the reduction of carbon emissions in their areas (see **Table B.6.1** below).

Table B.6.1: Local Authority Carbon Targets

Local Authority	Carbon Target
Cornwall	Local Authority area to be carbon neutral by 2030[34]
Devon	Local Authority area to be net zero by 2050 (council to be carbon neutral by 2030)
Somerset	Local Authority area to be carbon neutral by 2030
Plymouth	Local Authority area to be carbon neutral by 2030
Torbay	Local Authority area to be net zero by 2050

To-date most of the success in reducing UK emissions has been achieved by the non-transport sectors. The energy sector has made the most substantial progress with emissions falling by nearly 60% from 242 million tonnes in 1990 to 98 million tonnes in 2018. Business emissions have fallen by 40% and residential emissions by 16% in the same period. Transport emissions have remained fairly constant, representing 125 million tonnes in 1990 and 121 million tonnes in 2018, a reduction of 3% in the period. As a result, transport is now the sector producing the most emissions, 33% of the total.

[34] Cornwall Council has since prepared a Climate Emergency Development Plan Document (DPD) to cover the issue of climate change. Consultation on the pre-submission version of the DPD was completed between February and April 2021.

Road transport modes are the biggest overall emitters within the Peninsula region, with 69% of total transport emissions in 2016. Cars and LGVs were responsible for 54%, HGVs 12% and buses and coaches just 2%. For reference, in 2016 an estimated 0.22% of total car vehicle kilometres were driven in zero emission vehicles. Air emissions were responsible for 21% of the total in 2016, with the vast majority (20% coming from international flights). Maritime emissions were responsible for 9% of total emissions and rail just 1%.

The widely reported reduction in transport carbon emissions resulting from COVID-19 travel restrictions will be important additional context for understanding what scale of reductions are achievable for any given intervention as part of the Peninsula Strategy.

Effects of climate change

The outcome of research on the probable effects of climate change in the UK was released in 2018 by the UK Climate Projections (UKCP18)[35] team. UKCP18 gives climate information for the UK up to the end of this century and projections of future changes to the climate are provided, based on simulations from climate models. Projections are broken down to a regional level across the UK and are shown in probabilistic form, which illustrate the potential range of changes and the level of confidence in each prediction.

As highlighted by the research, the effects of climate change (under medium emissions scenarios 50th percentile and RCP6) for the South West during the period 2020-2039 compared to the period 1981-2000 are likely to be as follows:[36]

- A central estimate of increase in annual mean temperatures of between 0ºC and 1ºC; and
- A central estimate of change in mean precipitation of 0 to +10% in winter and 0 to -10% in summer.

During the period 2040-2059 this is estimated further as:

- A central estimate of increase in annual mean temperatures of between 1ºC and 2ºC; and
- A central estimate of change in annual mean precipitation of 0 to +20% in winter and -10% to -20% in summer.

Resulting from these changes, a range of risks may exist for the Peninsula region, including:

- Effects on water resources from climate change;
- Reduction in availability of groundwater for extraction;
- Adverse effect on water quality from low stream levels and turbulent stream flow after heavy rain;
- Increased risk of flooding, including increased vulnerability to 1:100 year floods;
- A need to increase the capacity of wastewater treatment plants and sewers;
- A need to upgrade flood defences;
- Soil erosion due to flash flooding;
- Loss of species that are at the edge of their southerly distribution;
- Spread of species at the northern edge of their distribution;
- Increased demand for air-conditioning;
- Increased drought and flood related problems such as soil shrinkages and subsidence;
- Risk of road surfaces melting more frequently due to increased temperature;

[35] Data released 26th November 2018 [online] available from: https://www.metoffice.gov.uk/research/collaboration/ukcp
[36] Met Office (2018): 'Land Projection Maps: Probabilistic Projections', [online map] available at: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/land-projection-maps

- Flooding of roads; and
- Accelerated erosion due to increased storminess and the resultant loss of habitat that can occur, especially where habitat migration is constrained by physical structures or inundation of coastal areas due to sea-level rise.

Flood risk

Resilience of the transport networks across the Peninsula region is critical, with the region's road and rail networks being particularly vulnerable to the impacts of coastal and inland flooding and the associated impacts of climate change. Many of the Peninsula's major transport corridors also lack a reasonable alternative, meaning that the impact of incidents, maintenance or weather events are severe and cause a huge amount of disruption to travel. There is only a single mainline rail route west of Exeter, and this is particularly susceptible to weather events around Dawlish and Teignmouth, resulting in a high risk of disruption for rail travellers.

In terms of flood risk zones, the level of potential flooding is noticeably high across the Somerset levels, and for areas of land surrounding major rivers such as the River Exe (Exeter), River Taw (Near Barnstaple) and the River Teign (Newton Abbot).

Across the Peninsula region's road network, there are a number of locations susceptible to environment influences such as flooding including locations on the A303, within Plymouth, east of the Launceston Tamar Valley, Crowlas and Hayle. Harsh weather conditions cause issues on routes such as the A30 given the high road altitude across Bodmin Moor and on the A380 Telegraph Hill and A38 Haldon Hill south of Exeter.

The impact of climate change, notably sea level rise and the increase in frequency and severity of weather events is forecast to cause increasing issues across the Peninsula region, including specific potential flood risks which have been identified at St Erth, Marazanvose, Indian Queens, Carland Cross, Belowda, and the A30 from Bodmin to Launceston.

Summary of Future Baseline

Climate change has the potential to increase the occurrence of extreme weather events in the Peninsula region, with increases in mean summer and winter temperatures, increases in mean precipitation in winter and decreases in mean precipitation in summer. This is likely to increase the risks associated with climate change, with an increased need for resilience and adaptation.

Additionally, climate change is predicted to cause rises in sea levels which will increase the risk of flooding from the sea in coastal areas. It is likely that the risk of flooding to high risk areas will increase in severity and periodicity.

Climate change also has the potential for significant impacts on various habitats located within the Peninsula region. The Inter Agency Climate Change Forum produced a report on the summary of impacts to biodiversity[37] within the UK as a result of climate change. The report notes that assessing the impacts of climate change on terrestrial and freshwater biodiversity is not easy, as plants and animals are influenced by other pressures, such as atmospheric pollution and land use, and different factors can work in combination to bring about change. However, changes are beginning to be observed across a range of species and habitats in the UK that have been related to climate change.

In terms of climate change mitigation, per capita emissions are likely to decrease as energy efficiency measures, renewable energy production and new technologies become more

[37] Natural England have produced a national biodiversity climate change vulnerability model which provides more information on a spatially explicit assessment of the relative vulnerability of priority habitats. Available [online] at: http://publications.naturalengland.org.uk/publication/5069081749225472

widely adopted. However, road transport and domestic sources are likely to be increasing contributors proportionally.

An ongoing increase in the use of electric and plug-in hybrid vehicles has the potential to reduce emissions from transport. More stringent emission standards on manufacturers will help accelerate this trend.

B.7 Healthy communities

Summary of current baseline

Population growth

In the past century, the population of the Peninsula has grown by about one million people, from 1.3 million in 1911 to 2.3 million in 2016. In the past 50 years, the population has grown at an average rate of nearly 8% per decade and central forecasts estimate the population will continue to grow, but at a slower rate of just under 5% per decade. In 2041 this means the population is estimated to be 2.6 million (representing 12.8% growth from 2016 to 2041). This rate of growth is slightly above the forecast average of 12.1% for England.

Each of the five authorities in the Peninsula are expected to increase in population, but that the rural authorities are forecast to grow faster, in the 13-14% range in the period from 2016 to 2041. Torbay is expected to grow about 12% and Plymouth 6% in the period from 2016 to 2041.

The geographical area of the Peninsula is large, at around 14,000 km^2, but the population is widely dispersed with an average of around 165 people per km^2 compared with an average of around 270 across the United Kingdom. The total population is around 2.3 million and there are three urban areas with a population exceeding 100,000: Exeter, Plymouth and Torbay. There are a large number of small and medium-sized towns (including coastal communities) making an important contribution to economic activity of the region.

Housing and Employment Growth

There are plans for nearly 200,000 new dwellings and more than 170,000 new jobs across the Peninsula Transport area in the period to 2040, shown below in **Table B.7.1**.

Table B.7.1: Planned housing and employment growth during Local Plan periods

Area	Planned Dwellings	New Jobs Created
Cornwall	52,500	38,000
Plymouth and South West Devon	26,700	20,410
North Devon and Torridge	17,200	11,000
Greater Exeter	52,000	40,000
Somerset	42,180	56,090
Torbay	8,900	5,500
Peninsula Total	**199,480**	**171,000**

Green Infrastructure Networks

Green infrastructure provides space – including natural green space – for recreation and relaxation, and access to nature has been evidenced to improve people's health and

wellbeing, through encouraging healthy outdoor recreation and relaxation. There is an existing regional network of green infrastructure in the Peninsula, including long distance walking and cycling routes, Public Rights of Way, as well as urban parks, rural parks and gardens and sports pitches. Most of the 1,000km South West Coast Path follows the Peninsula coastline.

Index of Multiple Deprivation

The Index of Multiple Deprivation 2019 (IMD) is an overall relative measure of deprivation constructed by combining seven domains of deprivation according to their respective weights, as described below. The seven deprivation domains are as follows:

- **Income:** The proportion of the population experiencing deprivation relating to low income, including those individuals that are out-of-work and those that are in work but who have low earnings (satisfying the respective means tests).
- **Employment:** The proportion of the working-age population in an area involuntarily excluded from the labour market, including those individuals who would like to work but are unable to do so due to unemployment, sickness or disability, or caring responsibilities.
- **Education, Skills and Training:** The lack of attainment and skills in the local population.
- **Health Deprivation and Disability:** The risk of premature death and the impairment of quality of life through poor physical or mental health. Morbidity, disability and premature mortality are also considered, excluding the aspects of behaviour or environment that may be predictive of future health deprivation.
- **Crime:** The risk of personal and material victimisation at local level.
- **Barriers to Housing and Services:** The physical and financial accessibility of housing and local services, with indicators categorised in two sub-domains.
    - ‘Geographical Barriers’: relating to the physical proximity of local services
    - ‘Wider Barriers’: relating to access to housing, such as affordability.
- **Living Environment:** The quality of the local environment, with indicators falling categorised in two sub-domains.
    - ‘Indoors Living Environment’ measures the quality of housing.
    - ‘Outdoors Living Environment’ measures air quality and road traffic accidents.
- Two supplementary indices (subsets of the Income deprivation domains), are also included:
    - **Income Deprivation Affecting Children Index**: The proportion of all children aged 0 to 15 living in income deprived families.
    - **Income Deprivation Affecting Older People Index:** The proportion of all those aged 60 or over who experience income deprivation.

Lower Super Output Areas (LSOAs) are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales. They are standardized geographies designed to be as consistent in population as possible, with each LSOA containing approximately 1,000 to 1,500 people. In relation to the IMD 2019, LSOAs are ranked out of the 32,844 in England and Wales, with 1 being the most deprived. Ranks are normalized into deciles, with a value of 1 reflecting the top 10% most deprived LSOAs in England and Wales.

Key trends across the peninsula are summarised below:

- High levels of deprivation are concentrated within Plymouth and Torbay.

- In Cornwall, the highest levels of deprivation are Penzance, Camborne, Redruth, St Austell/Clay Country, Liskeard, Callington and central rural areas.
- In Devon, the highest levels of deprivation are rural areas in the north along with Barnstaple, Bideford and Ilfracombe, and in the south Dawlish, Teignmouth, Exmouth and Newton Abbot.
- In Somerset, the highest levels of deprivation are north western rural areas and Exmoor, parts of Taunton, Yeovil, Bridgewater, Highbridge, Langport and Street.

Economy and employment

A large proportion of economic activity in the Peninsula is located along the main transport corridors of which the routes along the Peninsula east-west spine are the most critical. This spine runs west through Somerset to Exeter (via the M5) and then on to Plymouth (via the A38) and into Cornwall (via the A38 and the A30). It provides connectivity for the largest population centres in the Peninsula (and many of the smaller ones) and connects the Peninsula with Bristol and beyond (South Wales, the West Midlands and the North).

As employment patterns change, the number of people working from home is also rising quickly, and the Peninsula has a higher than average share of such people. Overall, around 150,000 people work at or mainly from home in the Peninsula. This is almost 15% of employed people and compares to only around 10% in England and Wales as a whole. The proportion of people working from home in the Peninsula is already higher than other regions of the UK and that this is likely to be linked to the popularity of the region as a place to relocate to live. The necessity for a large proportion of the population to work remotely since April of this year has the potential to drive a considerable acceleration in the (already upwards) trend in flexible working practices. For the Peninsula, this could mean higher levels of inward migration from other regions in the UK.

Devon is the largest economy in the Peninsula hosting around 320,000 jobs, of which around 90,000 are in Exeter. Somerset and Cornwall are similar in economic size with Somerset hosting around 230,000 jobs and Cornwall 210,000. There are around 110,000 jobs in Plymouth and 50,000 in Torbay. Across the UK, there has been a long term shift towards professional / managerial jobs within the service sector. The share of people in managerial, professional and associate professional and technical occupations has steadily grown.

Looking across all industries (defined broadly), the largest part of the Peninsula economy is wholesale and retail generating £5,061m of output in 2017, followed by manufacturing which generates very similar levels of economic output (£4,942m in 2017). The smallest business sectors were the ‘activities of households’ (mainly household employment of domestic staff) and ‘arts, entertainment and recreation’ (including for example theatres, libraries, museums and sporting activities).

The weighted average median weekly wage across the Peninsula is £515 compared to £585 in the UK as a whole. This means that Peninsula workers earn around £70 per week less than the average UK worker and around £3,600 less per year. This represents a deficit of around £3.3 billion pounds in annual wage income across the Peninsula every year.

The visitor economy also remains important for the Peninsula accounting for nearly 4.5% of economic output and 14% of employment. The South West is the most visited region in the UK with approximately 21 million domestic visitors in 2017 contributing £4.5 billion to the UK economy. With 72% of visitors to the South West originating from outside of the region, the transport system experiences significant seasonal increases in demand which result in capacity issues and congestion on some of the Peninsula’s most important corridors.

With an extensive coastline, the Maritime industry is an important sector in the Peninsula economy providing more than 15,000 full-time equivalent jobs and contributing close to £3 billion of GVA to the UK. Plymouth Port, Falmouth Harbour and Fowey Harbour are the

three largest ports in the Peninsula, but there are also a number of smaller ports and harbours making an important contribution to the economy, including Brixham, Newlyn and Penzance. It should be noted that other ports, particularly Bristol and ports within the South Coast Marine Cluster (including Weymouth, Poole and Bournemouth) are also important gateways for the Peninsula.

Fishing is also an important sector for Peninsula ports with 39 thousand tonnes of fish landed across the ports of Brixham, Newlyn and Plymouth in 2017. Falmouth Harbour is home to the largest ship repair complex in the UK (it is a centre of excellence for Ministry of Defence work), with three dry docks with capacity for vessels up to 100 thousand tonnes. HMNB Devonport is the largest naval base and dockyard in Western Europe and the port also has berths for passenger vessels, cruise liners and handling facilities for various freight types. The majority of freight at Fowey Harbour is exports of China Clay mined from the St Austell area and the quay is served by a freight rail line which enables delivery of the China Clay for loading onto vessels.

The airports at Exeter and Newquay are important economic gateways for the Peninsula. However, gateways in other parts of the country remain important to Peninsula businesses and residents, particularly Bristol airport and the London airports. Inter-regional air connections cater for small passenger volumes but supplement rail in providing for faster travel on longer journeys. The most important current function of the Peninsula airports at Exeter and Newquay is domestic passenger flights providing lower journey times than the rail and road alternatives to locations outside of the region.

The summary of travel demand by road, rail, air and sea in the Peninsula illustrates the current reliance on roads for the majority of passenger movements. Annually, around 1.35 billion trips are made within the Peninsula, of which the vast majority are by car. For inter-regional trips which are generally longer, the rail network makes an important contribution. It is estimated that there are around 138 million annual inter-regional passenger movements, of which around 6% are by rail. Regional air travel also plays a role. International journeys from the Peninsula are limited to flights from Exeter and Newquay airports and ferry sailings from Plymouth Port. For air travel the majority of Peninsula trips actually leave the region with perhaps two million passengers using Bristol airport and a further seven million using London airports.

Summary of Future Baseline

The population of 2.3 million is growing quickly and is expected to reach around 2.6 million by 2041. Growth will be broad based across all the Peninsula authorities and most age groups.

Traffic is expected to grow across all road types. Forecasts indicate sustained higher rates of traffic growth on motorways and trunk roads (growing by between 40% and 50% by 2050), and slower but still substantial growth on principal A roads and minor roads (both growing by between 30% and 35%).

New development has the potential to increase traffic and cause congestion within the Peninsula region, principally at junctions on key routes. This is likely to continue to be more pronounced during peak times (i.e. rush hours and during the summer season). This is significant in the local context, due to the pressures from the local road network. However, development within the Peninsula region has the potential to lead to enhancements to the transport network in order to promote more sustainable modes of travel, such as pedestrian and cycle networks.

Additionally, there are opportunities to improve public transport networks within the Peninsula region in order to facilitate for more sustainable modes of transport whilst alleviating pressures on main road networks. Similarly, the provision of infrastructure to promote at home (i.e. remote) working is likely to positively contribute towards these aims (particularly during the recovery from the COVID-19 epidemic).

Appendix C Scheme assessment tables

C.1 High priority schemes

Table C.1.1 Rail network decarbonisation

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it only involves the replacement of current rolling stock. However, it is noted that a move from diesel to electric trains is likely to have minor positive impacts on biodiversity by reducing pollution, particularly noise pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it only involves the replacement of current rolling stock. The scheme will not lead to the significant loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it only involves the replacement of current rolling stock. However, it is noted that a move from diesel to electric trains is likely to have minor positive impacts on the historic environment by reducing pollution, particularly noise pollution.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it only involves the replacement of current rolling stock. However, it is noted that a move from diesel to electric trains is likely to have minor positive impacts on landscape and townscape character by reducing pollution, particularly noise pollution.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality across the peninsula by supporting rail network decarbonisation, thereby reducing emissions from rolling stock which contribute to poor air quality. It will also likely lead to significant positive effects on noise quality as electric trains are quieter than diesel trains.	
Climate change and flood risk	The scheme will promote rail network decarbonisation, which will support reductions in carbon emissions and therefore contribute positively towards climate change mitigation. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk or the other impacts of climate change given it only involves the replacement of current rolling stock.	
Healthy communities	By promoting rail network decarbonisation the scheme will improve air quality and reduce noise pollution, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The decarbonisation of the current rolling stock across the peninsula will have positive effects for air quality, noise pollution, landscape and climate change mitigation.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.2 Peninsula rail card

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it does not deliver physical initiatives.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not deliver physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it does not deliver physical initiatives.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it does not deliver physical initiatives.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality across the peninsula by making rail travel more affordable, thereby making it a more accessible mode of transport and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	By making rail travel more affordable, thereby making it a more accessible mode of transport and supporting modal shift from the private car, the scheme will likely improve air quality, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The extension of the Devon and Cornwall Railcard to cover the whole peninsula region will have positive effects for accessibility and climate change mitigation.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.3 North Devon Line

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it only involves signal and route upgrades to reduce journey times.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it only involves signal and route upgrades. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it only involves signal and route upgrades to reduce journey times.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it only involves signal and route upgrades to reduce journey times.	

SEA theme	Assessment findings	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality across the peninsula by reducing journey times, thereby making rail travel a more attractive option and supporting modal shift from the private car. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given that no land take will be required for the scheme, as it only involves signal and route upgrades to reduce journey times.	
Healthy communities	By reducing journey times, thereby supporting accessibility, making rail travel a more attractive option, and supporting modal shift from the private car, the scheme will likely improve air quality, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Signal and route upgrades to enable a reduction in journey times from Exeter Central to Barnstaple will have positive effects for accessibility.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.4 South West Rail Resilience Programme Phase 5

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will include physical interventions such as cliff stabilisation. Notably, this stretch of the coast includes unit 3 of the Dawlish Cliffs SSSI, which is currently in an unfavourable – recovering condition. Nevertheless, effects are largely dependent on the nature of the cliff stabilisation measures, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant adverse effects on the fabric and setting of the historic environment given that there are designated heritage assets, namely listed buildings, in proximity to this part of the railway line. Nevertheless, effects are largely dependent on the nature of the cliff stabilisation measures, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant adverse effects on landscape character given that it will include physical interventions such as cliff stabilisation. Nevertheless, effects are largely dependent on the nature of the cliff stabilisation measures, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality by improving the resilience of this part of the railway line, thereby making rail travel a more reliable option and supporting alternative modes of transport from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is likely to mitigate flood risk along this part of the railway line, with significant positive effects anticipated.	

SEA theme	Assessment findings	
Healthy communities	By improving the resilience of this key part of the railway network, the key will support regional accessibility by rail. This will have a range of benefits for communities living south of Exeter.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering the final phase of the South West Rail Resilience Programme between Teignmouth and Dawlish, the scheme will have significant positive effects for climate change adaptation, as well as minor positive effects for air quality and climate change mitigation. The scheme will have significant positive effects for communities given the route is a key part of the south west's railway network.

Mitigation measures and enhancement opportunities

Cliff stabilisation and resilience measures should consider potential impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.

Table C.1.5 Devon Metro – West of England Line

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will include physical interventions to deliver a more frequent rail service. This could lead to the disturbance of habitats and species along this line. Nevertheless, effects are largely dependent on the layout and design of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is dependent on the amount of land take required of the scheme, which is uncertain at this stage.	
Historic environment	The scheme has the potential to lead to significant adverse impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the line. However, effects are largely dependent on the layout and design of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include physical interventions, namely the delivery of a dynamic loop. This is particularly relevant given this line passes through part of the East Devon National Landscape and Blackdown Hills National Landscape. However, effects are largely dependent on the layout and design of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to positive effects on air quality by improving the capacity of this part of the railway line, thereby making rail travel a more reliable option and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk if appropriate design and layout is incorporated into scheme design.	
Healthy communities	By increasing the capacity of the Exeter and Axminster service, providing two trains per hour, the scheme supports increased accessibility via public transport to the east of Exeter.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering additional infrastructure to provide two trains per hour between Exeter and Axminster, thereby improving resilience and capacity, the scheme will have positive effects for accessibility. It will also support air quality and climate change mitigation, through supporting alternative modes of transport to the private car.

Mitigation measures and enhancement opportunities

The design and layout of the dynamic loop should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.

Table C.1.6 Better Buses for Peninsula

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it does not deliver physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not deliver physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the historic environment by limiting traffic.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the historic environment by limiting traffic.	
Air quality and noise	The scheme will likely lead to positive effects on air quality across the peninsula by making bus travel a more attractive option and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support modal shift to lower carbon modes of travel, with benefits for climate change mitigation. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	The scheme will support modal shift from the private car, which will improve air quality, thereby supporting health and wellbeing. By making bus travel a more attractive option and supporting modal shift from the private car, the scheme will likely improve air quality, and in doing so it supports health and wellbeing.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The roll out of interoperable ticketing, consistent information and timetabling, and peninsula-wide bus improvements will have positive effects for accessibility, air quality, and climate change mitigation.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.7 Plymouth Metro

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will likely deliver physical interventions. Notably, this part of the railway network is in proximity to several designated sites for biodiversity. Nevertheless, effects are largely dependent on the nature of the proposed initiatives, including their location, layout and design, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is dependent on the amount of land take required of the scheme, which is uncertain at this stage.	
Historic environment	The scheme has the potential to lead to significant adverse impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway network. However, effects are largely dependent on the nature of the proposed initiatives, including their layout and design, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will deliver several physical interventions. However, effects are largely dependent on the nature of the proposed initiatives, including their layout and design, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to positive effects on air quality by improving the capacity of this part of the railway network, thereby making rail travel a more reliable option and supporting modal shift from the private car. This is significant given much of the city of Plymouth is an AQMA.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk if appropriate design and layout is incorporated into scheme design.	
Healthy communities	By improving the capacity of this part of the railway network, thereby making rail travel a more reliable option and supporting modal shift from the private car, the scheme will have significant positive effects for accessibility.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering rail infrastructure enhancements to facilitate improved services in the vicinity of Plymouth, the scheme will have positive effects for air quality and climate change mitigation. The measures will also have significant positive effects for accessibility.

Mitigation measures and enhancement opportunities

The design and layout of the initiatives proposed by the scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.

Table C.1.8 West Cornwall Rail Connectivity Upgrade

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will deliver several physical interventions. Notably, this stretch of the railway line is in proximity to several designated sites for biodiversity. Nevertheless, effects are largely dependent on the layout and design of the proposed initiatives, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is dependent on the amount of land take required of the scheme, which is uncertain at this stage.	
Historic environment	The scheme has the potential to lead to significant adverse impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway line. However, effects are largely dependent on the layout and design of the proposed initiatives, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will deliver several physical interventions. However, effects are largely dependent on the layout and design of the proposed initiatives, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this by improving the capacity of this part of the railway network, thereby making rail travel a more reliable option and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk if appropriate design and layout is incorporated into scheme design.	
Healthy communities	The scheme will support accessibility for those living in West Cornwall through enhancing rail services, including between St Ives and Penzance.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering line capacity improvements in St Ives, a passing loop, an extension to the St Erth Park and Ride, and through services between Penzance and St Ives, the scheme will have positive effects for air quality and climate change mitigation and support accessibility in West Cornwall.

Mitigation measures and enhancement opportunities

The design and layout of the initiatives proposed by the scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.

Table C.1.9 Devon Metro – Tavistock to Plymouth

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it will include the reopening of a railway line. Notably, this stretch of the railway line is in proximity to several designated sites for biodiversity. This could lead to the disturbance of habitats and species along this line. Nevertheless, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	

SEA theme	Assessment findings	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway line. However, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the reopening of a railway line. This has the potential to impact the setting and significance of the nearby Tamar Valley National Landscape. However, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality in this location by making rail travel an alternative option of transport to the private car, thereby supporting modal shift from the private car. However, it is noted that the reopening of the railway line will likely lead to an increase in noise pollution in this location.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	By making rail travel an alternative option of transport to the private car, thereby supporting modal shift from the private car, the scheme will likely improve air quality, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The reopening of the Tavistock-Plymouth line will have positive effects for accessibility, air quality, and climate change mitigation.

Mitigation measures and enhancement opportunities

The measures required to reopen the railway line should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and noise pollution.

Table C.1.10 BSIP Schemes

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will likely be required for the scheme, as it does not deliver physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not deliver physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will likely be required for the scheme, as it does not focus on physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the historic environment by limiting traffic.	

SEA theme	Assessment findings	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will likely be required for the scheme, as it does not focus on physical initiatives. However, by making bus travel a more attractive option and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the historic environment by limiting traffic.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality across the peninsula by making bus travel a more attractive option and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	By making bus travel a more attractive option and supporting modal shift from the private car, the scheme will likely improve air quality, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The implementation of continued BSIP programmes across the peninsula will have positive effects for accessibility, air quality, and climate change mitigation.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.11 South West Mobile Connectivity

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that it only concerns mobile connectivity.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not deliver physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that it only concerns mobile connectivity.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will likely be required for the scheme, given that it only concerns mobile connectivity.	
Air quality and noise	The scheme is unlikely to have significant impacts on air quality and noise given that it only concerns mobile connectivity.	
Climate change and flood risk	The scheme is unlikely to have significant impacts on climate change mitigation given that it only concerns mobile connectivity. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not involve land take.	
Healthy communities	By facilitating consistent 3G/4G/5G mobile connectivity across all lines in the peninsula for passengers and lineside residents, the scheme will likely make train travel a more attractive option, including through allowing users to reliably work on board.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By facilitating consistent 3G/4G/5G mobile connectivity across all lines in the peninsula for passengers and lineside residents, the scheme will likely make train travel a more attractive option.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.11 Bus decarbonisation

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it only involves the roll out of zero emission bus fleets. However, it is noted that a move from diesel to electric buses is likely to have minor positive impacts on biodiversity by reducing pollution, particularly noise pollution, as well as deposition.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it only involves the roll out of zero emission bus fleets. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it only involves the roll out of zero emission bus fleets. However, it is noted that a move from diesel to electric buses is likely to have minor positive impacts on the historic environment by reducing pollution, particularly noise pollution.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it only involves the roll out of zero emission bus fleets. However, it is noted that a move from diesel to electric buses is likely to have minor positive impacts on landscape and townscape character by reducing pollution, particularly noise pollution.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality across the peninsula by supporting bus decarbonisation, thereby reducing emissions from current bus fleets which contribute to poor air quality. It will also likely lead to significant positive effects on noise quality as electric buses are quieter than diesel buses.	
Climate change and flood risk	The scheme will promote bus decarbonisation, which will support reductions in carbon emissions and therefore contribute positively towards climate change mitigation. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it only involves the roll out of zero emission bus fleets.	
Healthy communities	By promoting bus decarbonisation the scheme will improve air quality and reduce noise pollution, and in doing so it supports health and wellbeing.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The roll out of zero emission bus fleets across the peninsula will have positive effects for air quality, noise pollution, and climate change mitigation. It will also help limit the impact of bus services on local neighbourhoods, supporting the health and wellbeing of residents.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.12 Demand Responsive Transport (DDRT)

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by promoting shared transport and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not focus on physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by promoting shared transport and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion.	
Landscape	The scheme is unlikely to have significant impacts on townscape or landscape character given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by promoting shared transport and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape character by limiting traffic and congestion.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this location by promoting shared transport and supporting modal shift from the private car. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it only involves the development and delivery of DRT solutions.	
Healthy communities	The scheme supports rural mobility by providing a local, accessible and inclusive mode of transport. This will support health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By developing and delivering DDRT solutions across the peninsula, including schemes related to rural mobility, the scheme will have positive effects for accessibility.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.13 Active Travel Investment

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that it involves active travel investment.	

SEA theme	Assessment findings	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given that it involves active travel investment. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is likely to lead to significant positive effects on the fabric and setting of the historic environment given that it will promote the use of active travel. This will support modal shift from the private car, thereby reducing the adverse impacts of traffic and congestion, including noise pollution, on the fabric and setting of the historic environment.	
Landscape	The scheme is likely to lead to significant positive effects on landscape and townscape character given that it will promote the use of active travel. This will support modal shift from the private car, thereby reducing the adverse impacts of traffic and congestion, including noise pollution, on landscape and townscape character.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality across the peninsula by making active travel a more attractive option and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	By promoting the use of active travel, the scheme will support health and wellbeing directly, as well as indirectly by improving air quality and reducing noise pollution.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By integrating active travel with bus and rail, and upgrading cross boundary and e-bike infrastructure, the scheme will have positive effects for air quality, noise pollution, climate change mitigation, and accessibility, as well as the fabric and setting of the historic environment and landscape and townscape character.

Mitigation measures and enhancement opportunities

None proposed.

Table C.1.14 Station access enhancements across all rail stations

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by improving access to rail stations and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not focus on physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by improving access to rail stations and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion and noise pollution.	

SEA theme	Assessment findings	
Landscape	The scheme is unlikely to have significant impacts on landscape and townscape character given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by improving access to rail stations and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion and noise pollution.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this location by making rail services more accessible and supporting modal shift from the private car. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not focus on physical initiatives.	
Healthy communities	By making rail services more accessible for all users, the scheme directly supports health and wellbeing. It also indirectly supports health and wellbeing by supporting modal shift from the private car.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By enhancing access to rail stations for all users across the peninsula, the scheme will have positive effects for accessibility.

Mitigation measures and enhancement opportunities

None proposed.

C.2 Short term strategic schemes

Table C.2.1 Reopen Wellington and Cullompton Stations

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given that some land take will likely be required for the scheme, as it involves the reopening of two railway stations. Notably, Wellington Station is in proximity to an area of deciduous woodland, whilst Cullompton Station is in proximity to an area of coastal and floodplain grazing marsh. These BAP priority habitats could be lost or disturbed as a result of the reopening of these railway stations. However, it is noted that by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is dependent on the amount of land take required of the scheme.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that some land take will likely be required for the scheme. Notably, Wellington Station is in proximity to several listed buildings, and their settings could be impacted by the scheme. However, it is noted that by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion and noise pollution.	
Landscape	The scheme has the potential to lead to significant impacts on landscape and townscape character given that some land take will be required for the scheme. This could impact	

SEA theme	Assessment findings	
	views out of / in to Wellington and Cullompton. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion and noise pollution.	
Air quality and noise	The scheme will likely lead to positive effects on air quality by making rail services more accessible and supporting modal shift from the private car.	
Climate change and flood risk	In relation to climate change mitigation, the scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the potential location of the station at Cullompton may affect, and be affected by, the River Culm's floodplain. Similarly, the reinstatement of the station at Wellington may be affected by the River Tone's floodplain (including tributaries.	
Healthy communities	By improving access to rail services and supporting modal shift from the private car, the scheme will support accessibility, and support health and wellbeing by improving air quality and reducing noise pollution.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By reopening the railway stations at Wellington and Cullompton, the scheme will have significant positive effects for accessibility, air quality and climate change mitigation. The scheme also has the potential to help limit the impacts of road traffic on key environmental receptors through supporting modal shift.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character. There may also need to be a need to manage potential flood risk issues locally.

Table C.2.2 Edginswell Station

SEA theme	Assessment findings	
Biodiversity	The scheme has some potential to lead to some impacts on biodiversity, including habitats and species and ecological networks, given that limited land take will likely be required for the scheme, for the opening of a new railway station. However, this is not considered to be significant given no designated sites for biodiversity, or BAP priority habitats, are located in the proximity of the likely site of the new railway station. It is noted that by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is not considered to be significant as the site of the new railway station is in a built-up part of Edginswell.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that some land take will likely be required for the scheme. This could impact views out of / in to Edginswell. It is noted that by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion and noise pollution.	

SEA theme	Assessment findings	
Landscape	The scheme has the potential to lead to impacts on landscape and townscape character given that some land take will likely be required for the scheme. However, this is not considered to be significant given no designated landscapes are located in the proximity of the site of the new railway station. It is noted that by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion and noise pollution.	
Air quality and noise	The scheme will likely lead to positive effects on air by making rail services more accessible and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme us adjacent to an area of flood zone 3. Impacts depend on design and layout of the new station however.	
Healthy communities	By improving access to rail services and supporting modal shift from the private car, the scheme will support accessibility (including locally to Torbay Hospital), and support health and wellbeing by supporting improvements to air and noise quality.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By opening a new railway station at Edginswell, the scheme will have significant positive effects for accessibility, air quality and climate change mitigation. The scheme also has the potential to help limit the impacts of road traffic on key environmental receptors through supporting modal shift.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on landscape and townscape character, and consider any flood risk issues identified.

Table C.2.3 Taunton to Bishops Lydeard

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it will include the reopening of a railway line. This could lead to the disturbance of habitats and species along this line. Nevertheless, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway line. However, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the reopening of a railway line. However, effects are largely dependent on the measures required to reopen the railway line, as well as the frequency of the service, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality in this location by making rail travel an alternative option of transport to the private car, thereby supporting	

SEA theme	Assessment findings	
	modal shift from the private car. However, it is noted that the reopening of the railway line will likely lead to an increase in noise pollution in this location.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. Uncertain impacts on flood risk.	
Healthy communities	By improving access to rail services and supporting modal shift from the private car, the scheme will support accessibility (including to Taunton), and support health and wellbeing by supporting improvements to air and noise quality.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The reopening of the railway line to Bishops Lydeard will have positive effects on accessibility, air quality and climate change mitigation.

Mitigation measures and enhancement opportunities

The measures required to reopen the railway line should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character and flood risk.

Table C.2.4 A38 Deep Lane Park and Ride

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new park and ride site will require land take. This could lead to the disturbance of habitats and species in this location, including BAP priority habitats deciduous woodland and traditional orchard. Nevertheless, effects are largely dependent on the design and layout of the new park and ride site, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are listed buildings in proximity of the site of the new park and ride. However, effects are largely dependent on the design and layout of the new park and ride site, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the delivery of a new park and ride site, which will require land take. This could impact views in this location, including views out of / in to the area. However, effects are largely dependent on the design and layout of the new park and ride site, which is uncertain at this stage.	
Air quality and noise	The scheme will support air quality enhancements in Plymouth by reducing the volume of private cars entering Plymouth. Whilst there are likely to be overall benefits for air quality, there may however be localised impacts on air quality in the vicinity of the park and ride.	
Climate change and flood risk	Park & Ride will support some limitation of greenhouse gas emissions through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, as the exact location of the new park and ride site is currently unknown, this is uncertain at this stage.	
Healthy communities	By limiting the volume of private cars entering Plymouth, the scheme will likely improve the quality of the public realm by limiting traffic and congestion, as well as improve air quality, and in doing so it supports health and wellbeing. The scheme will also support	

SEA theme	Assessment findings	
	accessibility for those with access to a private car (and potentially without given an increase in bus services likely to arise as a result of the scheme).	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering a new park and ride service to Plymouth from Deep Lane and Sherford new community, the scheme will have positive effects on accessibility. Park & Ride will support some limitation of greenhouse gas emissions and air and noise quality through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey. In addition, there may be localised impacts on the quality of the public realm from increased traffic flows.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character and flood risk.

Table C.2.5 A30 Kennards House – 5 Lanes (Plusha)

SEA theme	Assessment findings
Biodiversity	No significant impacts on biodiversity are anticipated given the scheme focuses on road safety measures.
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant given partial gap closure and safety measures are unlikely to result in significant land take.
Historic environment	No significant impacts on the historic environment are anticipated given the scheme focuses on road safety measures. This depends on the design and layout of the scheme, which is uncertain at this stage.
Landscape	No significant impacts on landscape character are anticipated given the scheme focuses on road safety measures. This depends on the design and layout of the scheme, which is uncertain at this stage.
Air quality and noise	The scheme is unlikely to lead to significant impacts on air quality given it focuses on safety measures.
Climate change and flood risk	The scheme is unlikely to lead to significant impacts on traffic flows given it focuses on safety measures. The scheme is unlikely to lead to significant landtake given it focuses on safety measures.
Healthy communities	By delivering safety measures, the scheme will reduce collision risk, and improve road safety.

Summary

By delivering partial gap closure and safety measures to reduce collision risk, the scheme will have positive effects on road safety.

Mitigation measures and enhancement opportunities

Scheme design should consider the setting of the historic environment and landscape character.

Table C.2.6 A38 Trerulefoot to Carkeel Safety Measures

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to minor positive impacts on biodiversity, including habitats and species and ecological networks, given it seeks to reduce speeding. This could reduce collisions with wildlife. However, this is not considered to be significant.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of some productive agricultural land.	
Historic environment	The scheme has the potential to lead to minor positive impacts on the fabric and setting of the historic environment given that it seeks to reduce speeding, which has an adverse impact on the historic environment. However, this is not considered to be significant.	
Landscape	The scheme has the potential to lead to minor positive impacts on landscape and townscape character given that seeks to reduce speeding, which has an adverse impact on landscape and townscape character. However, this is not considered to be significant.	
Air quality and noise	The scheme will likely lead to minor positive effects on air and noise quality in this location as it seeks to reduce speeding. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will likely lead to minor positive effects on climate change mitigation as it seeks to reduce speeding, which is associated with greater emissions. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme will not impact on flood risk given it does not involve any land take.	
Healthy communities	By deploying average speed and spot cameras and enforcement, the scheme will likely improve road safety, contributing to healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By deploying average speed and spot cameras and enforcement, to improve safety, the scheme will have positive effects on road safety.

Mitigation measures and enhancement opportunities

None proposed.

Table C.2.7 Coach links to Exeter and Bristol

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it does not focus on physical initiatives.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given it does not focus on physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by improving coach services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion.	
Landscape	The scheme is unlikely to have significant impacts on landscape and townscape character given that no land take will be required for the scheme, as it does not focus on physical initiatives. However, by improving coach services and supporting modal shift	

SEA theme	Assessment findings	
	from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape character by limiting traffic and congestion.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality in this location by making coach travel an alternative option of transport, thereby supporting modal shift from the private car. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it does not deliver physical initiatives.	
Healthy communities	By improving coach services the scheme supports accessibility.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By improving coach service provision from Torbay to Exeter and Bristol, the scheme will have positive effects on accessibility.

Mitigation measures and enhancement opportunities

None proposed.

C.3 Medium term strategic schemes

Table C.3.1 Yeovil Junction

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the extension of the double track section will require land take. This could lead to the disturbance of habitats and species along this line, including BAP priority habitats deciduous woodland, good quality semi-improved grassland, lowland meadows (the latter is designated as Grove Farm SSSI). Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are listed buildings in proximity to this part of the railway line. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the extension of the double track section, which will require land take. Notably, part of the line between Yeovil Junction and Crewkerne passes through the Dorset National Landscape. In this respect, the scheme has the potential to impact the setting and significance of this National Landscape. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will improve the capacity of the railway line in this location, supporting rail use and promoting modal shift from the private car. This will support air and noise quality.	

SEA theme	Assessment findings	
Climate change and flood risk	The scheme will improve the capacity of the railway line in this location, supporting rail use and promoting modal shift from the private car. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By improving the capacity of the railway network in this location, making it a more attractive alternative to the private car, the scheme will support accessibility.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By extending the double track section at Yeovil Junction towards Crewkerne by approximately 1.6km, the scheme will have positive effects on accessibility, and through supporting modal shift, air quality and noise and climate change mitigation.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.3.2 Gravity freight facility

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new rail freight facility will require land take. This could lead to the disturbance of habitats and species in this location, including BAP priority habitats coastal and floodplain grazing marsh, deciduous woodland, good quality semi-improved grassland, lowland calcareous grassland, and traditional orchard. Notably, the site of the Gravity freight facility is in proximity to the Somerset Wetlands NNR, which could also be impacted by the scheme. Nevertheless, effects are largely dependent on the design and layout of the new rail freight facility, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to the site of the Gravity freight facility. This including listed buildings – including two grade I listed – in nearby Puriton and Woolavington. However, effects are largely dependent on the design and layout of the new rail freight facilities, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that the delivery of a new rail freight facility will include land take. This includes views out of / in to nearby Puriton and Woolavington. However, effects are largely dependent on the design and layout of the new rail freight facilities, which is uncertain at this stage.	
Air quality and noise	Whilst the facility has the potential to increase localised air and noise quality issues, the scheme has the potential to limit freight movements on the wider road network, with benefits for air and noise quality.	
Climate change and flood risk	The scheme has the potential to limit freight movements on the wider road network, with benefits for climate change mitigation. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the exact location and design and layout of the new rail freight facility, which is uncertain at this stage.	

SEA theme	Assessment findings	
Healthy communities	By improving the capacity of rail freight services, the scheme has the potential to limit freight movements on the road network, with benefits for local communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst likely to lead to localised impacts in the vicinity of the facility, the scheme has the potential to limit freight movements on the wider road network. This has the potential to support climate change mitigation, air and noise quality, and the quality of neighbourhoods.

Mitigation measures and enhancement opportunities

The scheme should consider localised impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, flood risk and air and noise quality.

Table C.3.3 Additional long distance calls at Bridgwater

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it involves additional rail services. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given no land take will be required for the scheme. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it involves additional rail services. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion and noise pollution.	
Landscape	The scheme is unlikely to have significant impacts on landscape and townscape character given that no land take will be required for the scheme, as it involves additional rail services. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion and noise pollution.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this location by making rail services more accessible and supporting modal shift from the private car.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given no land take will be required for the scheme.	
Healthy communities	By improving access to rail services and supporting modal shift from the private car, the scheme will contribute positively to accessibility and improve air quality, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	

Key			
Neutral / no effect		Uncertain effects	

Summary

By adding nine daily Manchester-Exeter services to call at Bridgwater, the scheme will have positive effects on accessibility.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.4 Exeter St Davids – Dawlish signalling headways

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have significant impacts on biodiversity, including habitats and species and ecological networks, given that no land take will be required for the scheme, as it involves rail capacity improvements. However, by improving rail capacity and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme given no land take will be required for the scheme. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to have significant impacts on the fabric and setting of the historic environment given that no land take will be required for the scheme, as it involves rail capacity improvements. However, by improving rail capacity and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion.	
Landscape	The scheme is unlikely to have significant impacts on landscape and townscape character given that no land take will be required for the scheme, as it involves rail capacity improvements. However, by improving rail capacity and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this location by making improving rail capacity and supporting modal shift from the private car. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given no land take will be required for the scheme.	
Healthy communities	By improving rail capacity and supporting modal shift from the private car, the scheme will contribute positively to accessibility.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By reducing headways on the mainline from 4 to 3 minutes, increasing potential frequencies and capacity, the scheme will have positive effects on accessibility.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.5 Strategic Rail Freight terminal – Mid Cornwall

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to impacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new rail freight facility will require land take. This could lead to the disturbance of habitats and species along this line. Nevertheless, effects are largely dependent on the exact location and design and layout of the new rail freight facility, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment. However, effects are largely dependent on the exact location and design and layout of the new rail freight facilities, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that the delivery of a new rail freight facility will include land take. However, effects are largely dependent on the exact location and design and layout of the new rail freight facilities, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality by improving the capacity of rail freight services in Cornwall, thereby supporting modal shift from road freight services.	
Climate change and flood risk	The scheme has the potential to improve the capacity of rail freight services in Cornwall, thereby supporting modal shift from road freight services. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the exact location and design and layout of the new rail freight facility, which is uncertain at this stage.	
Healthy communities	By improving the capacity of rail freight services, the scheme has the potential to limit freight movements on the road network, with benefits for local communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

A potential new rail freight facility in Mid-Cornwall will have positive effects for air quality and noise pollution, climate change mitigation, and limit impacts of freight movements on local communities.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character and flood risk.

Table C.3.6 Strategic Rail Freight Interchange at Exeter Riverside Yard

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new rail freight facility will require land take. This could lead to the disturbance of habitats and species at this location, including BAP priority habitats deciduous woodland and coastal and floodplain grazing marsh. Nevertheless, effects are largely dependent on the design and layout of the new rail freight facility, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage.	

SEA theme	Assessment findings	
	The scheme is unlikely to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given there are listed buildings in proximity of this location. However, effects are largely dependent on the design and layout of the new rail freight facilities, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on townscape character given that the delivery of a new rail freight facility will include land take. This could impact views out of / in to surrounding development. However, effects are largely dependent on the design and layout of the new rail freight facilities, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality in this location by improving the capacity of rail freight services in Exeter, thereby supporting modal shift from road freight services.	
Climate change and flood risk	The scheme has the potential to improve the capacity of rail freight services in Exeter, thereby supporting modal shift from road freight services. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the exact location and design and layout of the new rail freight facility, which is uncertain at this stage.	
Healthy communities	By improving the capacity of rail freight services in Exeter, thereby supporting modal shift from road freight services, the scheme has the potential to improve air quality, reduce noise pollution, and improve road safety.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The potential new rail freight facility at Exeter Riverside, close to St David's Station, will have positive effects on air quality and noise pollution, climate change mitigation, and help limit impacts of freight movements on local communities.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, townscape character and flood risk.

Table C.3.7 West of Plymouth P&R

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to mpacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new park and ride site will require land take. This could lead to the disturbance of habitats and species to the west of Plymouth. Nevertheless, effects are largely dependent on the exact location and design and layout of the new park and ride site, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are numerous designated heritage assets to the west of Plymouth. However, effects are largely dependent on the exact location and design and layout of the new park and ride site, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the delivery of a new park and ride site, which will require land take.	

SEA theme	Assessment findings	
	However, effects are largely dependent on the exact location and design and layout of the new park and ride site, which is uncertain at this stage.	
Air quality and noise	The scheme will support air quality enhancements in Plymouth by reducing the volume of private cars entering the city. Whilst there are likely to be overall benefits for air quality, there may however be localised impacts on air quality in the vicinity of the park and ride.	
Climate change and flood risk	Park & Ride will support some limitation of greenhouse gas emissions through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, as the exact location of the new park and ride site is currently unknown, this is uncertain at this stage.	
Healthy communities	By limiting the volume of private cars entering Plymouth, the scheme will likely improve the quality of the public realm by limiting traffic and congestion, as well as improve air quality, and in doing so it supports health and wellbeing. The scheme will also support accessibility for those with access to a private car (and potentially without given an increase in bus services likely to arise as a result of the scheme).	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivery a new park and ride service to Plymouth, for travellers from Cornwall and the northwest, the scheme will have positive effects on accessibility. It is noted that environmental impacts will depend on the exact location of the park and ride site, which is uncertain at this stage.

Park & Ride will support some limitation of greenhouse gas emissions and air and noise quality through supporting modal shift from the private car to public transport. However, effects may be limited through the scheme encouraging car use for at least part of the journey.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.3.8 Tamar Bridge Capacity Management Options

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, as it is unlikely to involve significant physical interventions. Improvements to free flow tolling may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme as it is unlikely to involve significant physical interventions. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment as it is unlikely to involve significant physical interventions. Improvements to free flow tolling may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	

SEA theme	Assessment findings	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character as it is unlikely to involve significant physical interventions. Improvements to free flow tolling may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Air quality and noise	The proposed improvements to free flow tolling have the potential to improve air quality at this location through supporting a reduction in traffic and congestion. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Climate change and flood risk	Improvements to free flow tolling have the potential to increase overall traffic flows through improving congestion and reducing journey times by car. This has the potential to lead to increases in emissions from road transport. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk as it is unlikely to involve significant physical interventions.	
Healthy communities	The scheme will improve access between east Cornwall and Plymouth, and limit the local impacts of congestion, which will support healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By improving free flow tolling at Tamar Bridge, and delivering a long-term maintenance plan for the crossing, the scheme will have positive impacts on accessibility and help limit the localised impacts of congestion.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.9 A358 Improvements package

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including capacity improvements. This could lead to the disturbance of habitats and species in this location, including BAP priority habitats wood-pasture and parkland, coastal and floodplain grazing marsh, deciduous woodland, and traditional orchard. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is uncertain at this stage as it is unclear how much land take will be required of the capacity improvement measures.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this location, including listed buildings and grade II registered park and garden ‘Hatch (Beauchamp) Court. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to have more negative impacts on the fabric and setting of the historic environment, active travel improvements are likely to have more positive impacts.	

SEA theme	Assessment findings	
Landscape	The scheme has the potential to lead to significant impacts on landscape and townscape character given that it will include capacity improvements, which could require some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to have more negative impacts on landscape and townscape character, active travel improvements are likely to have more positive impacts.	
Air quality and noise	The scheme will likely lead to mixed effects on air and noise quality in this location as it delivers both capacity improvements and active travel improvements, which will likely adversely and positively contribute to air and noise quality respectively.	
Climate change and flood risk	The scheme will likely lead to mixed effects on climate change mitigation, as capacity improvements will likely lead to an increase in traffic flows over the wider area, whilst active travel improvements will support modal shift from the private car. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will likely involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering safety and active travel improvements, the scheme will support road safety and accessibility, and in doing so it supports healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering safety, capacity and active travel improvements between Taunton and the A303 at Southfields, the scheme will have positive impacts on road safety and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, air and noise quality, climate change mitigation, and flood risk.

Table C.3.10 Torpoint Ferries capacity improvements

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, as it does not involve physical initiatives. Improvements to access to Torpoint ferry may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme as it does not involve physical initiatives. The scheme will not lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment as it does not involve physical initiatives. Improvements to access to Torpoint ferry may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character as it does not involve physical initiatives. Improvements to access to Torpoint ferry may reduce traffic and congestion in this location. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the	

SEA theme	Assessment findings	
	scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Air quality and noise	The proposed improvements to access to Torpoint ferry have the potential to improve air quality at this location through supporting a reduction in traffic and congestion. However, through contributing to an overall increase in traffic flows through enhancements to the road network, the scheme has the potential to increase traffic flows over a wider area. Nevertheless, this is not considered to be significant.	
Climate change and flood risk	Improvements to access to Torpoint ferry have the potential to increase overall traffic flows through improving congestion and reducing journey times by car. This has the potential to lead to increases in emissions from road transport. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk as it does not involve physical initiatives.	
Healthy communities	The scheme will improve access between Torpoint and Plymouth, and reduce traffic and congestion, which will support health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering highway improves to improve access to Torpoint ferry, the scheme will have positive impacts on accessibility.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.11 A38 Deep Lane Junction and Public Transport

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including junction improvements. This could lead to the disturbance of habitats and species in this location, including BAP priority habitat deciduous woodland. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant given junction improvements are unlikely to result in significant land take.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there is a listed building in proximity to this junction. However, effects are unlikely to be significant given this building is approximately 300m from the junction. In addition, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst junction improvements are likely to have more negative impacts on the fabric and setting of the historic environment, public transport enhancements are likely to have more positive impacts.	
Landscape	The scheme has the potential to lead to significant impacts on landscape and townscape character given that it will include junction improvements, which will likely require some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst junction improvements are likely to have more negative impacts on landscape and townscape character, public transport enhancements are likely to have more positive impacts.	

SEA theme	Assessment findings	
Air quality and noise	The scheme will likely lead to mixed effects on air quality in this location as it delivers both junction improvements and public transport enhancements, which will likely adversely and positively contribute to air quality respectively.	
Climate change and flood risk	The scheme will likely lead to mixed effects on climate change mitigation, as junction improvements will likely lead to an increase in traffic flows over the wider area, whilst public transport enhancements will support modal shift from the private car. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering public transport enhancements the scheme will support accessibility, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering public transport enhancements to facilitate growth of Sherford new community, the scheme will have positive impacts on accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, air quality, climate change mitigation, and flood risk.

Table C.3.12 A38 A37, A361 A39 Connectivity and safety package

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to have any significant impacts on biodiversity, including habitats and species and ecological networks, given that it only seeks to deliver safety and resilience measures.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of some productive agricultural land.	
Historic environment	The scheme is unlikely to have any significant impacts on the fabric and setting of the historic environment given that it only seeks to deliver safety and resilience measures.	
Landscape	The scheme is unlikely to have any significant impacts on landscape and townscape character given that it only seeks to deliver safety and resilience measures.	
Air quality and noise	The scheme is unlikely to have any significant effects on air and noise quality given that it only seeks to deliver safety and resilience measures.	
Climate change and flood risk	The scheme is unlikely to have any significant effects on climate change mitigation given that it only seeks to deliver safety and resilience measures. In relation to adapting to the effects of climate change, the scheme will not impact on flood risk given it does not involve any land take.	
Healthy communities	The scheme seeks to improve road safety, contributing to healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering safety and resilience measures to improve wider connectivity and remove pinch points, the scheme will have positive impacts on road safety.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.13 Paignton branch capacity improvements

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given some of the measures proposed by the scheme, such as the doubling of a single line, will require land take. This could lead to the disturbance of habitats and species along this line. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme is unlikely to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway line. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will include the doubling of a single line, which will require land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. In addition, it is noted that the railway line is not exposed to the wider landscape in many locations.	
Air quality and noise	The scheme will likely lead to positive effects on air quality in this location by improving the capacity of the railway line in this location, making it a more attractive alternative to the private car, thereby supporting modal shift from the private car.	
Climate change and flood risk	The scheme will improve the capacity of the railway line in this location, supporting an enhancement of services between Torbay and the mainline at Newton Abbot, thereby supporting modal shift from the private car. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By improving the capacity of the railway line in this location, making it a more attractive alternative to the private car, the scheme will support accessibility, and in doing so it supports health and wellbeing.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering an additional through platform and footbridge at Newton Abbot, doubling the short single line at Newton Abbot, and replacing the crossover at Paignton, the scheme will have positive effects on air quality, climate change mitigation, and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.3.14 A38 St Budeaux Interchange

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the interchange is in a built-up part of St Budeaux with no notable constraints.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme is unlikely to lead to the loss of productive agricultural land given the interchange is in a built-up part of St Budeaux.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given that there are no designated heritage assets in proximity to the interchange. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to reduce traffic and congestion, they could also lead to an increase in traffic flows over the wider area, and therefore mixed effects are anticipated.	
Landscape	The scheme is unlikely to lead to significant impacts on townscape character given that the proposed junction improvements are unlikely to drastically change the appearance of the interchange. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to reduce traffic and congestion, they could also lead to an increase in traffic flows over the wider area, and therefore mixed effects are anticipated.	
Air quality and noise	The scheme will likely lead to mixed effects on air and noise quality in this location as it delivers junction improvements, which help manage traffic flows and congestion, but could also lead to an increase in traffic flows over the wider area. Notably, a large part of Plymouth is covered by an AQMA, which could be impacted by this scheme.	
Climate change and flood risk	The scheme will likely lead to adverse effects on climate change mitigation, as junction improvements will likely lead to an increase in traffic flows over the wider area, resulting in an increase in emissions from private cars. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution. Hence, mixed effects are anticipated.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution. Hence, mixed effects are anticipated.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, air and noise quality, and flood risk.

Table C.3.15 Transport Strategy and multi modal package for Gravity Site, Somerset

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives. This could lead to the disturbance of habitats and species in this location, including BAP priority habitats coastal and floodplain grazing marsh, deciduous woodland, good quality semi-improved grassland, lowland calcareous grassland, and traditional orchard. Notably, the Gravity site is in proximity to the Somerset Wetlands NNR, which could also be impacted by the scheme. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment as there are designated heritage assets in proximity to the Gravity site. This including listed buildings – including two grade I listed – in nearby Puriton and Woolavington. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape and townscape character given that it will likely require land take. This includes views out of / in to nearby Puriton and Woolavington. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air and noise quality in this location. This is because it delivers a multi modal access package, which could contribute to improved air quality, as well as reduce noise pollution, by encouraging the use of active travel and public transport.	
Climate change and flood risk	The scheme will likely lead to significant positive effects for climate change mitigation. This is because it delivers a multi modal access package, which could contribute to reducing emissions by encouraging the use of active travel and public transport. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering a multi modal access package, the scheme will likely encourage the use of active travel and public transport, thereby supporting healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering a multi modal access package and transport strategy to facilitate access to the new battery factory at Gravity site, Somerset, the scheme will have positive effects on air quality, noise pollution, climate change mitigation, and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, noise quality, and flood risk.

Table C.3.16 A30 Kennard House to Fivelanes (Plusha)

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves minor junction improvements, namely rationalising central reserve crossings and reducing collision risk. Notably, there are no designated sites for biodiversity in this location, and only a few BAP priority	

SEA theme	Assessment findings	
	habitats (primarily deciduous woodland). Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant given the junction improvements proposed are unlikely to result in significant land take.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given it involves minor junction improvements. However, there are several listed buildings in this location. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character given that it involves minor junction improvements. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme is unlikely to lead to significant effects on air and noise quality in this location as it delivers minor junction improvements, which is unlikely to increase traffic flows over the wider area.	
Climate change and flood risk	The scheme is unlikely to lead to significant effects on climate change mitigation as it delivers minor junction improvements, which is unlikely to increase traffic flows over the wider area. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given it delivers minor junction improvements.	
Healthy communities	The scheme will reduce collision risk, and in this respect, it supports healthy communities by improving road safety.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering junction improvements to rationalise central reserve crossings and reduce collision risk, the scheme will have positive effects on road safety.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, and landscape and townscape character.

Table C.3.17 A38 Weston Mill Junction

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including junction improvements. This could lead to the disturbance of habitats and species in this location, including BAP priority habitat deciduous woodland. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant given junction improvements are unlikely to result in significant land take.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given that there are no designated heritage assets in proximity to	

SEA theme	Assessment findings	
	this location. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character given the junction is relatively enclosed within the landscape. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to minor adverse effects on air and noise quality in this location as it delivers junction improvements, which could increase traffic flows over the wider area. However, this is not considered to be significant.	
Climate change and flood risk	The scheme will likely lead to minor adverse effects on climate change mitigation, as junction improvements will likely lead to an increase in traffic flows over the wider area. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution. Hence, mixed effects are anticipated.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The scheme will improve accessibility by limiting congestion. It will also support road safety in the vicinity of the junction. However, it is noted that junction improvements have the potential to lead to an increase in traffic flows over a wider area. Hence, mixed effects are anticipated.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.3.18 A38 Case for Action – Bodmin to Exeter

SEA theme	Assessment findings	
Biodiversity	It is currently unclear whether the scheme will lead to significant effects on biodiversity, including habitats and species and ecological networks, given a strategic study is due to be undertaken to determine potential schemes.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. It is currently unclear whether the scheme will lead to the loss of some productive agricultural land given a strategic study is due to be undertaken to determine potential schemes.	
Historic environment	It is currently unclear whether the scheme will lead to significant effects on the fabric and setting of the historic environment given a strategic study is due to be undertaken to determine potential schemes.	
Landscape	It is currently unclear whether the scheme will lead to significant effects on landscape and townscape character given a strategic study is due to be undertaken to determine potential schemes.	
Air quality and noise	It is currently unclear whether the scheme will lead to significant effects on air and noise quality given a strategic study is due to be undertaken to determine potential schemes.	

SEA theme	Assessment findings	
Climate change and flood risk	It is currently unclear whether the scheme will lead to significant effects on climate change mitigation and/or flood risk given a strategic study is due to be undertaken to determine potential schemes.	
Healthy communities	It is currently unclear whether the scheme will lead to significant impacts on healthy communities given a strategic study is due to be undertaken to determine potential schemes.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

It is currently unclear whether the scheme will lead to significant effects under any of the SEA themes given a strategic study is due to be undertaken to determine potential schemes.

Mitigation measures and enhancement opportunities

None proposed.

Table C.3.19 Cattedown Roundabout

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given there are no designated sites for biodiversity, or BAP priority habitats, in proximity to the roundabout. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant given junction improvements are unlikely to result in significant land take.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are listed buildings in proximity to the roundabout. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst junction improvements are likely to have more negative impacts on the fabric and setting of the historic environment, public transport and active travel improvements are likely to have more positive impacts.	
Landscape	The scheme is unlikely to lead to significant impacts on townscape character given the roundabout is located in a built-up part of Plymouth. In addition, public transport and active travel improvements could lead to minor positive impacts on townscape character through supporting modal shift.	
Air quality and noise	The scheme will likely lead to significant positive effects on air and noise quality in this location as both junction improvements and public transport and active travel improvements will likely limit congestion at this location, which will support air and noise quality both directly and indirectly via modal shift away from the private car.	
Climate change and flood risk	The scheme will likely lead to mixed effects on climate change mitigation, as junction improvements will likely lead to an increase in traffic flows over the wider area, whilst public transport and active travel improvements will support modal shift from the private car, helping to limit greenhouse gas emissions. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering public transport and active travel improvements, the scheme will support accessibility, as well as facilitate improvements to air quality, and in doing so it supports healthy communities.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering improvements to reduce congestion and delays at Cattedown Roundabout, improving the capacity of the route to Millbay Port, and providing bus priority and active travel improvements, the scheme will have positive impacts on air quality, noise pollution, and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, climate change mitigation, and flood risk.

Table C.3.20 A38 Trerulefoot to Carkeel Safety Measures

SEA theme	Assessment findings
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it will likely involve minor physical initiatives. However, it is noted that there are designated sites for biodiversity and BAP priority habitats in proximity to this stretch of the A38. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant.
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to the A38. This includes numerous listed buildings and grade I registered park and garden ‘Port Eliot’. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character given that it will involve minor physical initiatives. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.
Air quality and noise	The scheme is likely to lead to significant positive effects on air quality as it aims to address air quality concerns in local villages, including in locations covered by an AQMA.
Climate change and flood risk	The scheme is unlikely to lead to significant effects on climate change mitigation given it will likely involve minor physical initiatives, which are unlikely to increase overall traffic flows. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will likely involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.
Healthy communities	The scheme will improve conditions for all road users, including by reducing collision rates, and reducing air quality issues and therefore it supports road safety.

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering a package of interventions to improve conditions for all road users, including safety, congestion, and air quality concerns in local villages, the scheme will have positive effects on air quality and health and wellbeing.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and noise pollution.

Table C.3.21 A38 Liskeard to Trerulefoot

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it will likely involve minor physical initiatives. However, it is noted that there are designated sites for biodiversity and BAP priority habitats in proximity to this stretch of the A38. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is not considered to be significant.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to the A38. This includes numerous listed buildings. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character given that it will involve minor physical initiatives. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme is unlikely to lead to significant effects on air and noise quality in this location as it will likely involve minor physical initiatives, which are unlikely to increase overall traffic flows.	
Climate change and flood risk	The scheme is unlikely to lead to significant effects on climate change mitigation given it will likely involve minor physical initiatives, which are unlikely to increase overall traffic flows. In relation to adapting to the effects of climate change, the scheme is not likely to lead to significant impacts on flood risk.	
Healthy communities	By delivering safety measures, the scheme will reduce collision risk, and in this respect, it supports healthy communities by improving road safety.	

Summary

By delivering the long term resolution of safety risks, the scheme will have positive effects on road safety.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character.

Table C.3.22 A374 Western Approach to Millbay

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including highway capacity and freight improvements. This could lead to the disturbance of habitats and species along this route, particularly during construction. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme will not lead to the loss of productive agricultural land.	

SEA theme	Assessment findings	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this stretch of the A374, including listed buildings. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on townscape character given that it will include highway capacity and freight improvements, which will likely require some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to minor adverse effects on air and noise quality in this location as it delivers highway capacity and freight improvements, which could increase traffic flows over the wider area. Notably, a large part of Plymouth is covered by an AQMA, and therefore the scheme could impact air quality in this AQMA.	
Climate change and flood risk	The scheme will likely lead to minor adverse effects on climate change mitigation, as highway capacity and freight improvements will likely lead to an increase in traffic flows over the wider area. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering highway capacity and freight improvements, the scheme will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst the scheme will help manage congestion, with associated benefits, it has the potential to lead to an increase in traffic flows over a wider area, with implications for air and noise quality, climate change mitigation and impacts on the local environment. Hence, mixed effects are anticipated.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.3.23 Watchet Coastal Erosion Package

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will include physical interventions such as cliff wall stabilisation. Notably, this stretch of the coast includes the Blue Anchor to Lilstock Coast SSSI. Nevertheless, effects are largely dependent on the nature of the cliff stabilisation measures, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant adverse effects on the fabric and setting of the historic environment given that there are listed buildings in proximity to this part of the coast. Nevertheless, effects are largely dependent on the nature of the cliff wall stabilisation measures, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant adverse effects on landscape character given that it will include physical interventions such as cliff wall stabilisation.	

SEA theme	Assessment findings	
	Nevertheless, effects are largely dependent on the nature of the cliff wall stabilisation measures, which is uncertain at this stage.	
Air quality and noise	The scheme is unlikely lead to significant effects on air quality as it only delivers cliff wall stabilisation measures and the diversion of the B3191.	
Climate change and flood risk	The scheme is unlikely lead to significant effects on climate change mitigation as it only delivers cliff wall stabilisation measures and the diversion of the B3191. In relation to adapting to the effects of climate change, the scheme is likely to lead to significant positive effects given it will increase the resilience of the transport network in this location to the impacts of climate change, particularly coastal erosion.	
Healthy communities	By improving the resilience of this part of the coast the scheme will bring benefits for the local community.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By delivering cliff wall stabilisation measures and the diversion of the B3191, the scheme will have positive effects for climate change adaptation given it will increase the resilience of the transport network in this location to the impacts of climate change, particularly coastal erosion.

Mitigation measures and enhancement opportunities

Cliff stabilisation measures should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.

C.4 Long term strategic schemes

Table C.4.1 New Station at Langport and Somerton on Castle Cary - Taunton Line

SEA theme	Assessment findings	
Biodiversity	The scheme has uncertain effects on biodiversity given the location of the new station has not been determined nor the scale of land take required. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on biodiversity by reducing air pollution.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that the new station could be located in proximity to designated heritage assets. However, this is uncertain at this stage. Nevertheless, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on the fabric and setting of the historic environment by limiting traffic and congestion and noise pollution.	
Landscape	The scheme is unlikely to have significant impacts on landscape and townscape character given that some land take will likely be required for the scheme. However, by improving access to rail services and supporting modal shift from the private car, the scheme has the potential to lead to minor positive effects on landscape and townscape by limiting traffic and congestion and noise pollution.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality by making rail services more accessible and supporting modal shift from the private car.	

SEA theme	Assessment findings	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport, which significant positive effects anticipated. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel. In relation to adapting to the effects of climate change, the scheme has the potential to impact flood risk. However, this is dependent on the location of the new station, and its design, layout and required land take, which is uncertain at this stage.	
Healthy communities	By improving access to rail services and supporting accessibility, the scheme supports healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By opening a new railway station serving Langport and Somerton, between Taunton and Castle Cary, the scheme will have positive effects for air quality, climate change mitigation, and accessibility.

Mitigation measures and enhancement opportunities

These are dependent on the location, design and layout of the new station.

Table C.4.2 Heart of Wessex Line Improvement

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will deliver physical interventions, namely a passing loop. Notably, this stretch of the railway line is in proximity to several designated sites for biodiversity. Nevertheless, effects are largely dependent on the layout and design of the passing loop, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land. However, this is dependent on the amount of land take required of the scheme, which is uncertain at this stage.	
Historic environment	The scheme has the potential to lead to significant adverse impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the railway line. However, effects are largely dependent on the layout and design of the passing loop, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will deliver several physical interventions. However, effects are largely dependent on the layout and design of the passing loop, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to positive effects on air quality in this location by promoting modal shift from the private car to rail.	
Climate change and flood risk	The scheme will likely lead to positive effects for climate change mitigation by promoting modal shift from the private car to rail. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk if appropriate design and layout is incorporated into scheme design.	
Healthy communities	By improving the capacity of this part of the railway line, thereby making rail travel a more reliable option and supporting modal shift from the private car, the scheme will support accessibility.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The scheme will support accessibility, air and noise quality and climate change mitigation.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.

Table C.4.3 Goodrington Extension and proposed new station and park and ride

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the site for the new park and ride comprises a car park, and any land take required for the new station will be brownfield land. However, it is noted that the station and site for the new park and ride are in proximity to the Saltern Cove SSSI. Nevertheless, effects are largely dependent on the design and layout of the new platform and park and ride site, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme is unlikely to lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given that there are no designated heritage assets in proximity to this location. However, effects are largely dependent on the exact location and design and layout of the new platform and park and ride site, which is uncertain at this stage.	
Landscape	The scheme is unlikely to lead to significant impacts on townscape character given the site for the new park and ride comprises a car park, and any land take required for the new station will be brownfield land. However, effects are largely dependent on the exact location and design and layout of the new platform and park and ride site, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to positive effects on air quality in this location by promoting modal shift from the private car to rail.	
Climate change and flood risk	The scheme will likely lead to significant positive effects for climate change mitigation by promoting modal shift from the private car to rail. This will support reductions in carbon emissions. In relation to adapting to the effects of climate change, the scheme is unlikely to impact on flood risk given any land take required for the new station will be brownfield land.	
Healthy communities	By reducing the volume of private cars entering Torbay, the scheme will likely improve the quality of the public realm by limiting traffic and congestion, as well as improve air quality, and in doing so it supports health and wellbeing. The scheme will also support accessibility for those without access to a private car.	

Key			
Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By constructing a new single platform adjacent to Torbay owned land, and creating a new park and ride, the scheme will have positive effects on air quality, climate change mitigation, and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, and townscape character.

Table C.4.4 Bideford to Barnstaple rail extension

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it will include the relaying of 8km of railway track for the purposes of extending existing services. Notably, part of this line runs adjacent to the Taw-Torridge Estuary SSSI, as well as BAP priority habitat mudflats. This could lead to the disturbance of habitats and species along the new line. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land, although much of the route is currently used as a cycle route.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to the line, including numerous listed buildings. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that it will involve the reinstatement of a railway line along a sensitive part of the landscape, including the estuarine landscape of the River Taw. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality in this location by providing an extended rail service, thereby supporting modal shift from the private car. However, it is noted that the opening of a new line will likely lead to an increase in noise pollution in this location.	
Climate change and flood risk	The scheme will promote modal shift to non-car modes of transport. This will support reductions in carbon emissions through modal shift to lower carbon modes of travel, with significant positive effects anticipated. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given the railway line follows the edge of the River Taw estuary. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme will have significant positive effects for accessibility given it will provide a high-quality public transport link between Bideford and Barnstaple and Exeter. However, the scheme will go along the route of the existing Tarka Trail cycle link. Whilst there will be scope to retain this link, there may be short term effects on the useability of this active travel link.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

By relaying 8km of track from Barnstaple to Bideford to extend existing services, the scheme will have positive effects on air quality, climate change mitigation, and accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, noise quality, and flood risk.

There will be a need to retain the existing cycle trail along the route to ensure that this key active travel link is secured.

Table C.4.5 Tavistock Junction (Yard)

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the delivery of a new rail freight interchange will require land take. This could lead to the disturbance of habitats and species in this location, including BAP priority habitat mudflats. Nevertheless, effects are largely dependent on the design and layout of the new rail freight facility, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme is unlikely to lead to the loss of productive agricultural land.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given it involves the development of brownfield land in a built-up area of Plymouth. However, effects are largely dependent on the design and layout of the new rail freight interchange, which is uncertain at this stage.	
Landscape	The scheme is unlikely to lead to significant impacts on townscape character given it involves the development of brownfield land in a built-up area of Plymouth. In addition, the existing railway line and A38 already impact townscape character in this location. However, effects are largely dependent on the design and layout of the new rail freight interchange, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to significant positive effects on air quality by improving the capacity of rail freight services in Plymouth, thereby supporting modal shift from road freight services.	
Climate change and flood risk	The scheme has the potential to improve the capacity of rail freight services in Plymouth, thereby supporting modal shift from road freight services. This will support reductions in carbon emissions, with significant positive effects anticipated. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk. However, effects are largely dependent on the design and layout of the new rail freight interchange, which is uncertain at this stage.	
Healthy communities	By improving the capacity of rail freight services in Plymouth, thereby supporting modal shift from road freight services, the scheme has the potential to improve air quality, noise pollution, and road safety, contributing to healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The scheme has the potential to improve the capacity of rail freight services in Plymouth, supporting a removal of freight from the road network. This will have benefits for air and noise quality, climate change mitigation and the quality of neighbourhoods.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.4.6 A30 / A303 Blackdown

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it is likely to involve physical initiatives, including capacity improvements. This could lead to the disturbance of	

SEA theme	Assessment findings	
	habitats and species in this location, particularly those related to the Blackdown Hills, which are sensitive for biodiversity. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of some productive agricultural land. However, this is uncertain at this stage as it is unclear how much land take will be required of the capacity improvement measures.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this location. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant impacts on landscape character given that this route passes through the Blackdown Hills National Landscape. Hence, the scheme has the potential to impact the setting and significance of this National Landscape. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme has the potential to lead to significant adverse effects on air and noise quality in this location as it delivers capacity improvements, which could increase traffic flows over the wider area.	
Climate change and flood risk	The scheme has the potential to lead to adverse effects on climate change mitigation, as capacity improvements will likely lead to an increase in traffic flows over the wider area. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme will support accessibility and safety along this key route, By delivering capacity improvements, the scheme will however likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst the scheme is at an early stage of development, by delivering enhancements to the second strategic route between the A358 and Exeter to address capacity and safety issues, the scheme supports accessibility. The scheme has the potential to lead to significant impacts on landscape character given that this route passes through the Blackdown Hills National Landscape.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and climate change mitigation.

Table C.4.7 A361 Resilience Package

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will include physical interventions. This could lead to the disturbance of habitats and species in this location, particularly during construction. Nevertheless, effects are largely dependent on the nature of the flood and safety resilience measures, which is uncertain at this stage.	

SEA theme	Assessment findings	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant adverse effects on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this stretch of the A361. Nevertheless, effects are largely dependent on the nature of the flood and safety resilience measures, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant adverse effects on landscape character given that it will include physical interventions. Nevertheless, effects are largely dependent on the nature of the flood and safety resilience measures, which is uncertain at this stage.	
Air quality and noise	The scheme is unlikely lead to significant effects on air quality as it focuses on flood and safety resilience measures.	
Climate change and flood risk	The scheme is unlikely lead to significant effects on climate change mitigation as it only delivers flood and safety resilience measures. In relation to adapting to the effects of climate change, the scheme has the potential to reduce flood risk given it focuses on delivering flood resilience measures. This is significant given the considerable flood risk present along this part of the A361, which is located in the Somerset levels.	
Healthy communities	By improving the resilience of this part of the peninsula to flooding, and improving road safety, the scheme contributes positively to healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst the scheme is at an early stage of development, by delivering a flood and safety resilience package on the A361, the scheme will have positive effects for climate change adaptation and road safety.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character.

Table C.4.8 A30 Camborne to Penzance

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it will include physical interventions. This could lead to the disturbance of habitats and species in this location, particularly during construction. Designated sites for biodiversity in proximity to this stretch of the A30 include the Loggans Moor SSSI, Hayle Estuary & Carrack Gladden SSSI, and the Marazion Marish SPA and SSSI. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant adverse effects on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this stretch of the A30. This includes the Cornwall and West Devon Mining Landscape WHS, as well as numerous listed buildings and scheduled monuments.	

SEA theme	Assessment findings	
	Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant adverse effects on landscape character given that it will likely involve some land take, which will impact the historic mining landscape of the area. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme has the potential to lead to minor adverse effects on air quality as it delivers capacity measures, which could increase traffic flows over the wider area. However, this is not considered to be significant.	
Climate change and flood risk	The scheme has the potential to lead to significant adverse effects on climate change mitigation as it delivers capacity measures, which could increase traffic flows over the wider area. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By improving road safety, the scheme contributes positively to healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst the scheme is at an early stage of development, by delivering a safety, capacity and resilience package, the scheme will have positive effects for road safety. However, the scheme is constrained from a biodiversity and historic environment standpoint.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, landscape and townscape character, and flood risk.

Table C.4.9 J29-31 – M5 Exeter Gateway

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including capacity improvements. This could lead to the disturbance of habitats and species in this location, particularly during construction. Notably, this stretch of the M5 overlaps with part of the Exe Estuary SPA, Ramsar site and SSSI. Nevertheless, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant impacts on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this stretch of the M5. This includes numerous listed buildings. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to have more negative impacts on the fabric and setting of the historic environment, the scheme will deliver multi-modal measures, which is likely to have more positive impacts.	
Landscape	The scheme has the potential to lead to significant impacts on landscape and townscape character given that it will include capacity improvements, which will likely require some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage. Whilst capacity improvements are likely to have	

SEA theme	Assessment findings	
	more negative impacts on landscape and townscape character, the scheme will deliver multi-modal measures, which is likely to have more positive impacts from limiting the impact of road traffic on landscape character.	
Air quality and noise	The scheme will likely lead to mixed effects on air quality in this location as it delivers capacity improvements, but with a focus on multi-modal measures, which will likely adversely and positively contribute to air quality respectively.	
Climate change and flood risk	The scheme will likely lead to mixed effects on climate change mitigation, as capacity improvements will likely lead to an increase in traffic flows over the wider area, whilst multi-modal measures will support modal shift from the private car. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	By delivering multi-modal measures to mitigate congestion, the scheme will support accessibility via non-car modes of transport, and in doing so it supports healthy communities.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Whilst the scheme is at an early stage of development, by addressing capacity and congestion issues on the strategic gateway into the peninsula, through a multi-modal package of measures to mitigate congestion, the scheme will have positive effects for accessibility.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, the setting of the historic environment, landscape and townscape character, climate change mitigation, and flood risk.

Table C.4.10 A303 South Petherton to Southfields – RIS Pipeline

SEA theme	Assessment findings	
Biodiversity	The scheme has the potential to lead to significant adverse effects on biodiversity, including habitats and species and ecological networks, given it involves physical initiatives, including junction improvements. Notably, this part of the A303 is in proximity to the Sparkford Wood SSSI, as well as BAP priority habitats coastal and floodplain grazing marsh, wood pasture and parkland, deciduous woodland, lowland meadows, traditional orchard, good quality semi-improved grassland, lowland calcareous grassland, and purple moor grass and rush pastures. This could lead to the disturbance of habitats and species in this location, both during construction and operation of the scheme. Nevertheless, it is noted that effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme has the potential to lead to the loss of productive agricultural land.	
Historic environment	The scheme has the potential to lead to significant adverse effects on the fabric and setting of the historic environment given that there are designated heritage assets in proximity to this part of the A303. This includes grade II registered park and gardens ‘Hazlegrove House’ and ‘Compton Castle’ as well as several scheduled monuments and numerous listed buildings, Nevertheless, it is noted that effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Landscape	The scheme has the potential to lead to significant adverse effects on landscape character given that junction improvements will likely require some land take. In addition, part of this stretch of the A303 is in proximity to the Cranborne Chase & West Wiltshire	

SEA theme	Assessment findings	
	Downs. Nevertheless, it is noted that effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage, and the existing A303 at this location has significant impacts on local landscape character.	
Air quality and noise	Through enhancing traffic flows at a highly congested part of the A303, the scheme has the potential to support air and noise quality on the route. However, road improvements have the potential to increase traffic flows over a wider area. Mixed effects are therefore anticipated.	
Climate change and flood risk	The scheme will likely lead to minor adverse effects on climate change mitigation, as junction improvements could increase traffic flows over the wider area. However, this is not considered to be significant. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme has the potential to support road safety at an accident hotspot. The scheme will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution. However, through enhancing traffic flows at a highly congested part of the A303, the scheme has the potential to support air and noise quality on the route. Mixed effects are therefore anticipated.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

Through enhancing traffic flows at a highly congested part of the A303, the scheme has the potential to support air and noise quality on the route, and promote road safety. The scheme however the potential to increase traffic flows over a wider area, which could adversely impact with associated environmental implications. Mixed effects therefore.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on biodiversity, agricultural land, the setting of the historic environment, and landscape and townscape character, and flood risk.

Table C.4.11 Sandy Road / Holland Road junction

SEA theme	Assessment findings	
Biodiversity	The scheme is unlikely to lead to significant impacts on biodiversity, including habitats and species and ecological networks, given the junction is in a built-up part of Plympton, and is not in proximity to any designated sites for biodiversity of BAP priority habitats.	
Water and soil resources	No significant impacts on water quality are anticipated from the scheme if the required embedded mitigation measures are incorporated within the construction stage. The scheme is unlikely to lead to the loss of productive agricultural land given the junction is in a built-up part of Plympton.	
Historic environment	The scheme is unlikely to lead to significant impacts on the fabric and setting of the historic environment given that there are no designated heritage assets in proximity to this location.	
Landscape	The scheme is unlikely to lead to significant impacts on landscape and townscape character given that the junction is in a built-up part of Plympton, and therefore any land take will likely be brownfield land. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Air quality and noise	The scheme will likely lead to minor positive effects on air quality in this location as it delivers junction improvements, which could limit congestion in the area. However, it may contribute to air quality issues over a wider area through increasing traffic flows.	

SEA theme	Assessment findings	
Climate change and flood risk	The scheme will likely lead to minor adverse effects on climate change mitigation, as junction improvements will likely lead to an increase in traffic flows over the wider area. In relation to adapting to the effects of climate change, the scheme has the potential to impact on flood risk given it will involve some land take. However, effects are largely dependent on the design and layout of the scheme, which is uncertain at this stage.	
Healthy communities	The scheme will support a limitation of congestion in the area, with benefits for accessibility those living locally. However, by delivering junction improvements, the scheme will likely lead to an increase in traffic flows over the wider area, which could adversely impact health and wellbeing by increasing air and noise pollution, including potentially in Plympton.	

Key

Likely adverse effect (without mitigation measures)		Likely positive effect	
Neutral / no effect		Uncertain effects	

Summary

The scheme has the potential to bring mixed effects. Whilst it will help limit congestion in the area around the junction, with benefits for those living locally, in the longer term it may lead to an increase in overall traffic flows in the area, with implications for the quality of the built environment.

Mitigation measures and enhancement opportunities

The scheme should consider impacts on landscape and townscape character, and flood risk.