Western Gateway Strategic Transport Body

Strategic Investment Plan

Strategic Environmental Assessment – Environmental Report

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1 Introduction

1.1 Overview

1.1.1. WSP have been commissioned by Western Gateway Sub-national Transport Body (STB) to undertake a Strategic Environmental Assessment (SEA) to support the development of their Strategic Investment Plan (SIP).

1.1.2. Western Gateway STB published their Strategic Transport Plan in March 2024, and are now developing the associated SIP which will provide the framework for investment in strategic transport infrastructure for the period 2025-2035 to deliver on the objectives of the STP.

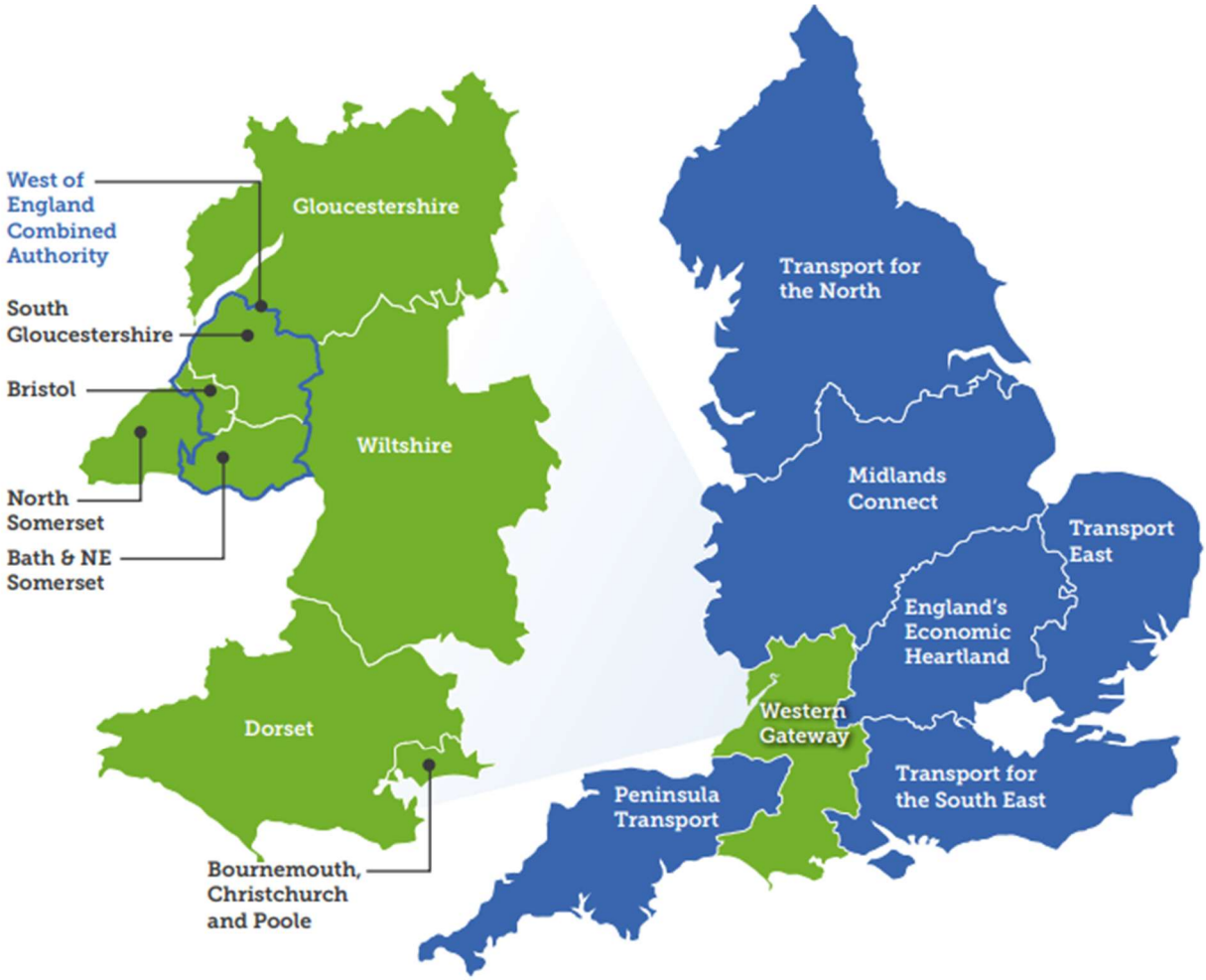
1.1.3. The Western Gateway STB is a partnership of eight Local Authorities and one Mayoral Combined Authority that have committed to work together to drive innovation, facilitate the transition to a decarbonised transport system, maximise economic growth and improve industrial productivity by strengthening travel connections to local, national and international markets.

1.1.4. The authorities that make up the STB are:

- Bath and North East Somerset Council
- Bournemouth, Christchurch & Poole Council (BCP)
- Bristol City Council
- Dorset Council
- Gloucestershire County Council
- North Somerset Council
- South Gloucestershire Council
- Wiltshire Council
- West of England Mayoral Combined Authority (West of England MCA)

1.1.5. The Western Gateway STB Region and its relationship with the other STBs is shown in **Figure 1-1** overleaf.

Figure 1-1 - Western Gateway STB Region[1]



1.2 Purpose of this Report

1.2.1. Western Gateway STB has commissioned WSP to undertake a Strategic Environmental Assessment (SEA) (process reported in this Environmental Report) to ensure that environmental and sustainability aspects are incorporated into the development of the SIP.

1.2.2. The SEA has also been informed by a Health Impact Assessment and an Equalities Impact Assessment.

1.2.3. This report sets out the update of the SEA, following public consultation on the draft SIP . The first stage of the SEA process (Stage A), Scoping, was completed in November 2024

[1] Western Gateway (2024) Strategic Transport Plan 2024-2050. Available online at: https://westerngatewaystb.org.uk/strategy/western-gateway-strategic-transport-plan/

with the receipt of comments from the SEA statutory consultees. The second stage of the SEA process (Stages B and C), assessment and reporting, were completed in December 2024. Following this, the draft SEA and SIP were consulted on from December 2024 to January 2025 (Stage D).

1.2.4. This Environmental Report includes the following:

- Assessment of the SIP;
- Assessment of reasonable alternatives;
- Assessment of cumulative effects;
  Outlining initial mitigation and enhancement measures; and
- Setting out next steps.

2 Western Gateway STB Strategic Investment Plan

2.1 Background

2.1.1. The Western Gateway STB is one of the seven sub-national transport bodies in England. The STB provides joint strategic leadership on strategic transport matters, across the nine constituent Local Authorities within the region, as shown in **Figure 1-1**.

2.1.2. Western Gateway published their Strategic Transport Plan (STP)[2] in March 2024. The STP provides a link between national policy and local strategy. It interprets national policy for a regional context to guide future transport investment and provide a supporting context for the nine Local Authorities in producing their Local Transport Plans.

2.1.3. The STP is aligned with plans produced by National Highways and Network Rail. It focuses on strategic issues relevant to the region as a whole, based on the following seven criteria:

- Have significant impact beyond local boundaries
- Require cross-boundary co-operation and/or delivery
- Improve access to regionally or nationally significant destinations
- Improve access to regionally or nationally significant gateways
- Overcome a severance or connectivity issue that unlocks regional benefits or resilience
- Facilitate strategic movement between the Midlands and the South Coast
- Increase efficiency, reliability and/or sustainability of essential goods movement on strategic routes

2.1.4. The STP identified short-term strategic transport priorities as well as providing a long-term plan, for strategic transport corridors within the Western Gateway STB Region. The five key themes/aims within the STP are:

- **Sustainable growth and economy**: Supporting sustainable housing and employment growth by improving connectivity to enable all parts of our region to flourish
- **Decarbonisation and air quality**: Delivering the changes needed to reduce emissions from transport and achieve net zero carbon.
- **Access to services and opportunities**: Enabling access to services and opportunities for everyone while reducing the need to drive.
- **Facilitate strategic north-south movements**: Improving transport links from north to south to ensure prosperity and opportunity for all.
- **Movement of goods**: Easing freight movements on our strategic routes and supporting a shift to rail, coastal shipping and alternative fuels.

[2] Western Gateway Sub-National Transport Body, Strategic Transport Plan 2020-2025. Available at: https://westerngatewaystb.org.uk/strategy/2020-2025-western-gateway-strategic-transport-plan/

2.2 Purpose and elements of the Strategic Investment Plan

Vision and Objectives

2.2.1. The vision and objectives for the SIP remain the same as those of the STP.

2.2.2. The collective vision of Western Gateway STB for the STP and SIP is as follows:

"A resilient transport network that works for everyone and is fit for the future, helping people and businesses throughout the Western Gateway to thrive while protecting our environment."

2.2.3. To achieve this vision, the SIP seeks to identify proposals that can deliver the objectives outlined below:

1. Support the economy to thrive and level up across the whole region, particularly where prosperity is constrained by poor connectivity.
2. Facilitate sustainable visitor access to our key tourism areas.
3. Maintain and improve sustainable access for goods and people to national and international gateways.
4. Reduce annual regional transport carbon emissions from 6,250kt CO2e (2019) to net zero by 2050.
5. Minimise embodied carbon.
6. Deliver the infrastructure/conditions/services necessary to prioritise a shift to low carbon modes.
7. Improve access to essential goods, services and opportunities in target areas.
8. Maintain and improve access to important regional and national destinations through our strategic transport networks.
9. Improve north-south rail and road links between the Midlands and South Coast on identified corridors/routes delivering social and economic benefits & levelling up southern parts of the region.
10. Improve journey time reliability on strategic routes (identified in STP).
11. Increase ability for goods moved by road to shift to rail or coastal shipping.
12. Improve HGV facilities on strategic freight routes to increase attractiveness, discouraging running on unsuitable alternatives.

2.2.4. These 12 objectives are drawn from the STP and relate to the delivery of the STP's five key aims.

Purpose of the SIP

2.2.5. Western Gateway STB' SIP sets out a list of regional transport proposals for the period 2025-2035, prioritised according to their potential to cost-effectively deliver the aims and objectives of the adopted STP.

2.2.6. The SIP fulfils three important functions:

1. Identifies regional transport proposals that are best able to deliver the aims of the STP.
2. Enables Western Gateway STB to provide a prioritised list of investment opportunities in the region, in response to policy or funding opportunities from the Department for Transport or other bodies.
3. Maintains an inventory of regional-level schemes proposed by our partner authorities.

2.2.7. The SIP is not intended to present a comprehensive catalogue of all transport schemes in the Western Gateway STB region. The proposals included in the current SIP are only those that are significant to the region as a whole and which can be started by 2035. There are many schemes not included in the SIP because the scope of the scheme is mostly restricted to one Authority area and therefore can be most effectively delivered through their Local Transport Plan – i.e. they are out of scope for a regional strategy.

Overview of SIP Options Proposals

2.2.8. 101 proposals were submitted to the STB by the nine Local Authorities in the region, National Highways and Network Rail. They included different proposal types such as public transport, mass transit, transport hubs and interchanges, active travel, road improvements (including capacity and safety improvements), rail stations and services improvements.

2.2.9. An initial assessment of the 101 proposals resulted in a long-list of options comprising 62 proposals. Proposals sifted out at this initial assessment stage were so mainly due to:

1. Not being regional in scope and therefore not in scope for the SIP.
2. Being duplication of proposals submitted by other partners.
3. Being insufficiently developed to allow analysis.

2.2.10. The long-list of options was subject to an assessment process against the 12 objectives listed above and compared to the estimated cost of each proposal via a multi-criteria assessment, with 38 top priority proposals identified as the primary focus of future investment recommendations (i.e. are regional in scale and have been identified as best able to deliver the five aims of the STP at the lowest cost).

2.2.11. Section 5 of the SIP provides information on the assessment criteria and methodology whilst Section 6 presents the prioritisation resulting from the multi-criteria assessment.

3 SEA Methodology

3.1 Introduction

3.1.1. Strategic Environmental Assessment (SEA) / Sustainability Appraisal (SA) is carried out during the preparation of certain plans and strategies including local transport plans, local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

3.1.2. SEA is mandatory for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste or water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations[3].

3.1.3. It is enacted in law through the 'Environmental Assessment of Plans and Programmes Regulations' (SI 2004/1633, known as the SEA Regulations)[4].

3.1.4. SEA is an iterative process of gathering data and evidence, assessment of environmental effects, developing mitigation measures and making recommendations to refine plans or programmes in view of the predicted environmental effects.

3.1.5. SEA only considers the environmental effects of a plan whilst SA also considers a plan's wider economic and social effects in addition to its environmental impacts. It is obligatory that SAs meet all of the requirements of the SEA Regulations. The SEA of the SIP also considers the topics covered by the SA process. The approach adopted for the SEA/SA element of the SIP follows that set out in the Practical Guide to SEA[5] and the Planning Practice Guidance to SEA[6].

3.1.6. Western Gateway STB is not a statutory body, so there is no legal requirement to undertake specific assessments reflecting the requirements of the regulatory framework for transport plans. However, the STB constituent authorities are bound by these regulations, and there is a wish to demonstrate best practice and clear commitments to the over-arching aims of

[3] The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [online] Available at: http://www.legislation.gov.uk/uksi/2017/571/introduction/made
[4] SI 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations 2004 [online] Available at: http://www.legislation.gov.uk/uksi/2004/1633/pdfs/uksi_20041633_en.pdf
[5] Office of the Deputy Prime Minister (2005) A Practical Guide to the Strategic Environmental Assessment Directive. available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf
[6] Department for Communities and Local Government (2015) Strategic environmental assessment and sustainability appraisal. Available at: http://planningguidance.communities.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/

accessibility, equity, affordability and safety that are stated in the long term STP for the region.

3.1.7. **Appendix A** sets out more information on how this report meets the requirements of the SEA Regulations.

3.2 Key SEA Stages

3.2.1. The key stages of the SEA process are as follows:

- **Stage A:** Setting the context and objectives, establishing the baseline and deciding on scope.
- **Stage B:** Developing and refining strategic alternatives and assessing their effects.
- **Stage C:** Preparing the Environmental Report.
- **Stage D:** Consulting on the draft plan or programme and the Environmental Report and prepare a Post Adoption Statement.
- **Stage E:** Monitoring the significant effects of implementing the plan or programme on the environment.

3.3 Stage A – Scoping

3.3.1. A Scoping Report, in support of the emerging SIP, was produced by WSP in October 2024, which initiated the SEA process. This report reviewed relevant legislation, plans, and programmes baseline, identified baseline information as well as key issues and opportunities for the SIP and identified an assessment framework. A copy of the Scoping Report is included as **Appendix B**.

3.3.2. This report was consulted on with the SEA Statutory Consultees (Environment Agency, Historic England and Natural England) in October 2024 and details on their consultation comments can be found in **Appendix C**.

3.4 Stages B and C - Assessment and Reporting

3.4.1. Stage B comprises of the assessment of the draft SIP, against the SEA objectives identified within the Scoping Report.

3.4.2. As per the SEA regulations, the assessment process also needs to consider and compare all reasonable alternatives as the plan evolves and assess these against the baseline environmental, economic and social characteristics of the STB region. Reasonable alternatives are the different realistic options considered by the plan-maker in developing the plan.

3.4.3. This SEA Interim Report will therefore cover the assessment of:

- Draft SIP
- Alternative options
- Intra and inter project cumulative effects.

Assessment of Effects

3.4.4. The assessment of effects has considered the following:

- Whether they are positive, negative, uncertain or negligible.
- Overall effect significance (negative, positive, uncertain, potential for both negative and positive effect or negligible)
- Nature of effect (direct, indirect)
- Spatial Extent (local, regional, national)
- Reversibility of effect:
  - Reversible: The receptor can return to baseline condition without significant intervention
  - Irreversible: The receptor would require significant intervention to return to baseline condition
- Duration (short, medium or long term) – Short term: 0-5 years, Medium term: 5-10 years (up to the end of the plan period) Long term: 10+ years (beyond the plan period).

3.4.5. **Table 3-1** sets out the key to the assessment whilst the detailed Assessment criteria is set out in **Appendix D**.

Table 3-1 – Key to Assessment

Effect Significance	Key
Potential for significant positive effects	++
Potential for significant negative effects	--
Uncertain effects – Uncertain or insufficient information on which to determine the appraisal at this stage	?
Negligible / No effect	0

Assessment of draft SIP Options

3.4.6. An assessment of each of the preferred SIP options (totalling 38 transport schemes) was carried out against the SEA Framework of objectives and using the methodology set out in **Appendix D**. An individual assessment matrix was produced for each scheme and the findings are summarised in **Section 5** and detailed assessments presented in **Appendix E**.

Assessment of Alternatives

3.4.7. For the purpose of the draft SIP, the assessment of alternatives comprised the assessment of the other options (totalling 24 transport schemes) identified as part of the short-list of schemes. An assessment of each of the alternative options was carried out against the SEA

Framework of objectives and using the methodology set out in **Appendix D**. An individual assessment matrix was produced for each scheme and the findings are summarised in **Section 6** and detailed assessments presented in **Appendix E**.

Cumulative Effects

3.4.8. The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Therefore, a number of plans and policies (local, regional and national) have been reviewed for potential cumulative effects (i.e. inter-project cumulative effects) in addition to potential cumulative effects that could occur as a result of the implementation of the draft SIP (i.e. infra-project cumulative effects).

3.4.9. The assessment of cumulative effects has been undertaken in **Section 7** of this report.

Mitigation, Enhancement and Monitoring Measures

3.4.10. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment as a result of implementing the plan.

3.4.11. Mitigation measures have been identified in relation to the assessment of the draft SIP options. These include both proactive avoidance of adverse effects and actions taken after potential effects have been identified. These are set out in **Section 8** of this report.

3.4.12. **Section 8** also includes enhancement measures, which aim to optimise positive impacts and enhance sustainability. The mechanism for delivery of mitigation and enhancement will ensure the prevention, reduction and offset of any significant adverse effects and promotion of enhancement opportunities on the environment.

3.5 Stages D and E: Consultation and Monitoring

3.5.1. This document reports the SEA process and constitutes the Environmental Report under the SEA Regulations. In accordance with the regulations, the Environmental Report must be made available at the same time as the draft plan, as an integral part of the consultation process. An SEA Post-Adoption Statement will be prepared following the consultation period summarising how responses to consultation and the SEA have influenced the development of the SIP. This process is also set out in **Section 10** of this report.

3.5.2. The SEA Report was consulted on alongside the draft SIP from December 2024 to January 2025. Consultation comments relating to the SEA, EqIA, and HIA have been outlined in **Appendix C**.

3.5.3. The SEA Regulations require that monitoring is undertaken on a plan so that the significant effects of implementation can be identified and remedial action imposed, as well as measuring the benefits of enhancement. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final plan, and to measure the performance of the plan against sustainability objectives and targets. Monitoring is also

used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information. These are set out in **Section 8** of this report.

3.6 Assumptions and Limitations

3.6.1. The SEA has been based on the information available at the time and provided on the draft SIP proposals and the alternative options. The level of detail provided on each proposal is limited and many proposals are at an early stage of development. This means there is a high degree of uncertainty and risk with some proposals.

3.6.2. WSP endeavour to predict effects accurately based on the evidence available; however, there are significant uncertainties given the high level nature of the plan and availability of information. Given uncertainties there is inevitably a need to make some assumptions, however, these are explained where necessary within the methodology and assessment text. A proportionate and precautionary approach has been taken in the identification and evaluation of potential significant effects based on the level of information available and the presence of sensitive receptors.

3.6.3. The current STP was developed and approved in March 2024, under the previous Conservative government. It is therefore acknowledged that the STP and its associated SIP are likely to require review when the targets and priorities of the new government are published.

3.6.4. The assessment of the draft SIP and alternatives has been undertaken as a desk-based exercise using the baseline information from the Scoping Report.

3.6.5. In some instances, given reasonable assumptions, it is not possible to predict ‘significant effects’, but it is possible to comment on the potential positive and negative effects of the draft plan and its alternatives in more general terms.

4 Identifying Sustainability Issues

4.1 Introduction

4.1.1. This section sets out the sustainability issues and opportunities for the SIP and the SEA Appraisal Framework, against which the SIP has been assessed.

4.1.2. A Scoping Report, in support of the emerging SIP, was produced by WSP in October 2024, which initiated the SEA process (see **Table 3-1**). This report reviewed relevant legislation, plans, and programmes baseline, identified baseline information, including the future baseline without implementation of the SIP, as well as key issues and opportunities for the Local Plan and identified an assessment framework. A copy of the Scoping Report is provided as **Appendix B**.

4.1.3. This report was consulted on with the Statutory Consultees (Environment Agency, Historic England and Natural England) in October 2024 and details on their consultation comments can be found in **Appendix C**.

4.2 Review of Plans Policies and Programmes

4.2.1. A plan may be influenced in various ways by other plans, policies or programmes, or by external environmental protection objectives such as those laid down in policies or legislation. These relationships enable the Responsible Authority to take advantage of potential synergies and to deal with any inconsistencies and constraints.

4.2.2. The Scoping Report undertook an initial review of policies, plans, programmes, strategies and initiatives that may have an impact on the preparation of relevant policies being reviewed as part of the SIP. This review has informed both the development of the SIP and the SEA framework.

4.2.3. Full details on the review of plans, policies and programmes is set out in Appendix A of the Scoping Report included as **Appendix B**.

4.3 Sustainability Issues and Opportunities

4.3.1. The Scoping Report set out a number of issues and opportunities for the SIP, for each of the SEA topics outlined in the Scoping Report. These have been summarised in **Table 4-1** below.

Table 4-1 - Sustainability Issues and Opportunities

Topic	Summary of Sustainability Issues and Opportunities
Population and Human Health	Issues ■ The population of the STB Local Authorities is predicted to increase both in number and age profile. ■ Substantial quantities of new housing must be delivered in the region across the coming years to meet this increasing requirement and deliver on the Government's housing requirement. In many cases, this must be delivered in Authorities with large rural areas. ■ Transport issues affect different groups to varying extents, with barriers to accessing and using transport exacerbated by age, ethnicity, income and gender. ■ An increased population will see an increase in demand on services, particularly transport and mobility, with the future implementation of transport policies required to consider how to better respond to the mobility needs of a more diverse, growing and ageing population. ■ Low population density and longer distances in rural areas means that providing cost-effective, regular and convenient public transport is already challenging. Around a quarter of residents of Western Gateway live in such areas. ■ Lack of phone/internet connectivity in certain areas prevents the use of digital services and increases the need to travel. ■ Social isolation and loneliness, mental health, obesity, preventable disease, ageing population and disparities between health are challenges affecting communities across the Western Gateway STB region. ■ Transport availability, particularly public transport, affects wellbeing because it facilitates social connectedness. ■ Demographic change will require a rethinking of current transport strategies, with new challenges set to arise such as an increasing number of older drivers on the road and more people with dementia using public transport. ■ With increasing prevalence of mental health conditions, transport systems often come with challenges that exacerbate feelings of anxiety, overwhelm, fear and loneliness. ■ Sexual assault and violence are the crimes most likely to occur on public transport. ■ There are areas across the region which have high levels of crime deprivation, particularly in Bristol. ■ Vulnerable road users such as cyclists, pedestrians, and horse riders are more likely to be traffic accident casualties. ■ As the population within the Western Gateway STB region increases there are expected to be a greater number of vehicles on the region's roads, which may result in an increase in the number of accidents and those KSI on roads. Opportunities ■ The SIP present opportunities to deliver a more affordable and accessible transport network that helps addressing deprivation and promotes social inclusion. This is a key aim of the Strategic Transport Plan. ■ New technologies and business models are presenting new transport and travel options. These have the potential to improve the competitiveness of public transport journeys relative to the private car by providing a more seamless travel experience ■ The SIP should seek to maximise opportunities for improving transport connectivity and resilience in rural areas. ■ There are opportunities to improve access through transport services, digital services and by bringing services to people. ■ Mode of transport affects physical and mental health, via mechanisms including physical activity and commuting time and improved quality of life. ■ Infrastructure should be adapted for groups such as disabled and pregnant women, accessible and addresses anxiety, mental health safety and security related concerns. ■ Public transport services should include adequate lighting and communication systems (including on board and at stops/stations) and suitable monitoring and maintenance systems. ■ There are opportunities for the SIP to contribute towards local authorities within the Western Gateway meeting the NPPF requirement for housing development.
Economy	Issues ■ The Western Gateway STB region is prosperous, with the West of England particularly recognised as the biggest net contributor to the public purse outside of London. ■ Although the STB contains important centres of economic activity, spatial distribution of economic activity is unequally distributed, being concentrated in economic centres of Bristol and Bath, and major towns in North Somerset. GDP is much higher in Bristol and South Gloucestershire than it is along the south coast. ■ Western Gateway has several areas and communities that experience poor transport connectivity, especially with respect to corridor connectivity, largely located in rural areas of the STB region. ■ Health inequalities and barriers to work persist in clusters around the region, with poor transport connectivity aligning to create "double deprivation" in some areas. ■ Increasing skills gap and recruitment and retention challenges, including in science, technology, engineering and mathematics (STEM), digital, health and social care and construction ■ Changing work patterns such as remote, internet-based jobs and working from home are likely to reduce the growth of transport demand ■ The change in working habits has also affected traditional 5/2 day shift patterns with an increase in nighttime working. ■ Rural communities face ongoing reduction in passenger transport services

	▪ Physical connectivity remains poor for many rural areas, with a lack of infrastructure and poor affordability risking creating exclusion. ▪ Behaviour changes, funding and service cuts, increased costs and driver shortages are impacting viability of bus services. ▪ If employment remains more concentrated in urban centres, this could put increased pressure on transport systems as commuting distances increase. ▪ Dorset has a lower working age population than the average and there are high levels of economic inactivity. Opportunities ▪ The SIP presents opportunities to attract investment and grow the region's economy to support regeneration and growth. ▪ Strategic and coordinated action to remove transport-related barriers to employment and education via improved access to economic centres and addressing known areas of deprivation and existing connectivity gaps. ▪ Increase connectivity, particularly North – South, will lead to greater productivity from the existing workforce due to much improved journey times and help to balance out the North-South differential in GDP. ▪ The SIP could help to enhance connectivity to the international gateways, such as major ports and airports in the area and improved connectivity to global gateways.
Biodiversity	Issues ▪ There are a number of statutory local, national and international sites designated for nature conservation in the region which may be affected by increased population, transport infrastructure development, and climate change. ▪ The trend in biodiversity decline across the UK shows habitats, and wildlife corridors outside of these protected areas are especially at risk of being lost, damaged or fragmented by transport development. ▪ Secondary impacts of transport networks, such as noise disturbance, air pollution and lighting can have detrimental impacts on biodiversity and species movements. ▪ Though not the key cause, transport networks have contributed to the decline in natural capital, habitat fragmentation, and species decline. ▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem services provision. Opportunities ▪ UK Government objectives of halting biodiversity loss by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042 ▪ and to protect 30% of our land and sea also by 2030. ▪ The Local Authorities within the Western Gateway STB are developing, or have developed, Local Nature Recovery Strategies. This provides opportunities for the SIP to work together with these strategies to protect and enhance biodiversity ▪ The SIP presents opportunities to be strategic in the enhancement of biodiversity through recommending the use of green infrastructure (GI) in development arising from the SIP. These can be combined with priorities for wider ecosystems services benefits to deliver landscape wide improvements. ▪ The SIP presents an opportunity to support schemes that promote and implement biodiversity net gain. ▪ Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes. There are opportunities for the SIP to enhance connectivity between these spaces, improving ecosystem services. ▪ Biodiversity and natural capital enhancements can be better planned and delivered when considered at programme level for further development at plan and project level
Landscape and Townscape	Issues ▪ Transport infrastructure has the potential to cause direct and indirect impacts on designated landscapes and seascapes, eroding the character and quality of the landscapes and seascapes, increasing pollution and eroding the visual amenity for residents and visitors alike. ▪ Increased development, including transport interventions, poses a serious risk to tranquillity and light pollution through increased population, traffic and visitors. As such, there is a need to protect the special quality of landscapes and seascapes. ▪ Future growth in some locations could risk compromising landscape and townscape character and features, however a landscape-led design with GI principles in place, could play a key role in the enhancement of the natural environment, visual amenity and improved socioeconomic outcomes. ▪ Climate change will also put pressure on the landscape and seascape designations as new pests and diseases emerge, sea levels rise and extreme weather increasing the stresses on nature conservation. ▪ Future growth in some locations could risk compromising landscape and townscape character and features, however a landscape-led design with GI principles in place, could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people. ▪ There is a need to reduce/ limit increases in light pollution and protect Dorset's dark skies. Opportunities ▪ The design of transport infrastructure requires a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape, especially in sensitive locations. ▪ Landscape-led designs can help contribute to the climate change agenda, health and wellbeing, and tackling pollution in all its forms (such as air, light and noise).

	▪ Support of decarbonisation and reduction in the number of cars on the road network, will also help to reduce road traffic noise and air pollution emissions, increasing levels of tranquillity. ▪ A clean and well connected transport system can improve access to green spaces hence providing additional benefits in terms of health, well-being and social cohesion.
Historic Environment	Issues ▪ The Western Gateway STB region is home to numerous important sites of historic and archaeological interest, including the Jurassic Coast, historic villages and Roman remains in the Cotswolds, white horses in Wiltshire and the World Heritage City of Bath. ▪ New and/or upgraded transport infrastructure across the area has the potential to affect the survival, fabric, condition and setting of cultural heritage assets (both above and below ground) through increased noise and visual effects, increased congestion, intensification of existing traffic or the construction of new road or rail, in addition to increased pressure from population growth. ▪ Highly significant archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign). ▪ Vehicle damage and pollution can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important area to address. ▪ There are still significant gaps in our understanding of the historic environment. The use of early assessment and, where necessary, field evaluation, can minimise the risk of encountering unexpected remains during construction. This information can also inform the design of transport schemes and any strategies to mitigate impact on the historic environment. Opportunities ▪ There are opportunities for enhancing the setting of heritage assets through the development of schemes that reduce traffic noise, limit traffic movements within historic urban areas, and enhance accessibility through active modes. ▪ There are opportunities to improve the connections to heritage assets and encourage visitors, improving knowledge and enjoyment of the historic environment. ▪ There are opportunities for good design that is sensitive to the historic environment and seeks to enhance the sense of place, character and experience of the historic environment. ▪ Keeping development within the existing highway boundaries and reprovisioning existing highways for development, may help to reduce the impact heritage assets. ▪ Decarbonisation presents opportunities to reduce the number of vehicles on local roads, reducing the degradation of heritage assets. ▪ Reducing the number of heavy vehicles passing close to heritage assets can reduce their degradation. ▪ Improved access to heritage assets by a clean well connected transport system can foster healthy lifestyles, community cohesion, provide a “sense of place” and drive economic vitality.
Water Environment	Issues ▪ The Western Gateway STB region has a number of important coastal and inland waterways, including the Rivers Severn, Avon and Frome, and coastal ports and basins in Dorset and Bournemouth, Christchurch and Poole. ▪ Road-related pollution, including light, noise, vibration, de-icing salt, dust, particles from wear and tear of tyres and pavements, metals, herbicides, and exhaust emissions (e.g. NOx, CO and particulates) can affect the water environment. Other effects include habitat fragmentation and vehicle-wildlife collisions)[7]. ▪ The physical and chemical quality of water resources is an important aspect of the natural environment and can be adversely affected by pollution associated with surface water runoff from new or existing transport infrastructure, as well as by changes to waterbodies which can affect their quality as a habitat ▪ Of the 603 water bodies, just 12% are achieving ‘good’ ecological status, falling far short of the WFD target of achieving ‘good’ for all water bodies. ▪ Meeting water supply demand over the next 25 years will be challenging in the South West. Deficits may develop across England by the 2050s due to climate change alone; these would be exacerbated by population growth and increasing demand and consumption of resources. ▪ Increased development (including transport infrastructure) can increase flood risk on a local and catchment scale. Opportunities ▪ Upgrading existing infrastructure provides the opportunity to improve pollution control, including the reduction of litter and microplastics through mitigation measures. For example, Sustainable Urban Drainage Systems (SuDS), and other nature-based solutions or grey infrastructure to help deliver water quality improvements alongside other co-benefits like attenuating water and flood control.

[7] Phillips et. al. (2021). Spatial Extent of Road Pollution: A National Analysis. Available online at https://www.sciencedirect.com/science/article/pii/S0048969721006574:

	▪ New transport infrastructure could result in improved drainage, reducing discharge from roads and surface water flooding ▪ The SIP could seek to include schemes that incorporate or retrofit sustainable urban drainage systems (SuDS) and GI requirements within new developments in order to mitigate road-related pollutant run-off, adapt to climate change and counteract flood risk. GI can also reduce surface water runoff and have water quality co-benefits
Air Quality	Issues ▪ 24 areas in the Western Gateway STB region are currently designated as Air Quality Management Areas, these are primarily located in the more urban areas of the STB region. There are also Clean Air Zones in the centre of Bath and Bristol. ▪ Poor air quality is one of the greatest environmental risks to human health. ▪ Reducing air pollution can result in reductions in stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma ▪ Replacing fossil fuel derived electricity with decarbonised electricity will lead to substantial reductions in emissions of NOx and sulphur dioxide (SO_2) and hence in $PM_{2.5}$ and O_3. ▪ The UK Government's plan to end the sale of all new conventional petrol and diesel cars and vans by 2035 and support for work and home-based electric charging facilities, will promote use of hybrid and electric vehicles, with positive effects for air quality. ▪ However, emissions of non-exhaust particles from friction and abrasion such as from tyre, brake and road surface wear, and the resuspension of road dust, will continue to be a significant source of particulate matter (PM_{10} and $PM_{2.5}$) emissions, even from a fully electric vehicle fleet. These emissions could increase if average vehicle mass and numbers were to increase, as it may with larger batteries. ▪ The number of vehicles on the roads is likely to increase as the population rises, putting air quality and AQMAs at further risk of degradation. ▪ Climate change itself is expected to affect air quality in the UK by influencing emissions, atmospheric processing and transport of many pollutants - some of these effects are likely to slow or temporarily reverse improvements in air quality. ▪ More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality. Opportunities ▪ The SIP should support active travel measures that encourage a shift away from car use to walking, cycling and public transport provide both decarbonisation and improvements in air quality, as well as health benefits that extend beyond improving air quality. ▪ There are opportunities for the SIP to prioritise schemes that will encourage private car users to switch to electric vehicles, by ensuring charging infrastructure is sufficient to meet demand. ▪ The SIP can contribute to the creation of healthy places, streets and communities that promote active transport, improve air quality, and improve road safety. ▪ Providing more reliable and efficient journeys will help to minimise the negative impact of congestion and support sustainable growth by enabling efficient movement of people and goods, reducing carbon emissions and engine idling.
Climatic Factors	Issues ▪ Flooding (tidal and surface water) is a key risk for the region and both property and infrastructure (road and rail). ▪ Flooding is set to be exacerbated by climate change and sea-level rise, presenting further risks to properties and infrastructure with increased maintenance required. ▪ Transport is the largest contributor to greenhouse gas emissions in the UK at 33% of total emissions and in the Western Gateway STB region with the largest contributor being domestic transport at 38.5%. ▪ Most Western Gateway Local and Combined Authority partners have passed resolutions declaring a 'climate emergency'. The differing characteristics of the local authority areas within the region means that the current levels of carbon emissions, their available carbon budgets and trajectories to net zero carbon emissions will differ, and some authorities have the ability and the ambition to move forward at a faster pace[8]. ▪ There is a high reliance on private transport and high levels of car ownership in rural areas, where around 87% of journeys are made by car[9]. ▪ Higher per capita emissions in more rural authorities where private car ownership and use is high and necessary due to fragmented transport systems ▪ The region can expect to see increased climate hazards including heatwaves, droughts and more frequent adverse weather events including intense rainfall events and flooding, regardless of how successful global policies are in achieving net zero. ▪ Climate change has the potential to disrupt operations and damage the transport network, through hazards such as flooding, subsidence, high and low temperatures, and other extreme weather event.

[8] Western Gateway Sub-national Transport Body. Strategic Transport Plan 2020-2025.
[9] Western Gateway Sub-national Transport Body (2022) South West Rural Mobility Strategy. Available at: https://westerngatewaystb.org.uk/wp-content/uploads/2024/07/WG-PT-Rural-Mobility-Strategy-Final-Draft-Strategy-v3.pdf

	▪ There will be an increasing need to implement climate change mitigation and adaptation measures considering changing environmental conditions, including low-carbon and resilient transport infrastructure. ▪ New infrastructure schemes need to take account of both embodied and operational emissions at an early strategic stage in decision making. Opportunities ▪ The Western Gateway STB is committed to delivering decarbonisation. ▪ The Western Gateway's strategic environmental priority in relation to the climate emergency and relating to decarbonisation set out in this transport plan is to reduce carbon emissions to net zero by 2050 at the latest. ▪ The SIP presents opportunities to help deliver an increasingly reliable transport network that efficiently manages transport demand and is resilient to climate change. ▪ Increasing the resilience of transport infrastructure not only protects the infrastructure itself, but it also improves wellbeing and protects vulnerable groups from being excessively affected by climate impacts.
Material Assets	Issues ▪ Flooding (tidal and surface water) is a key risk for the region, which is set to be exacerbated by climate change and sea-level rise, presenting risks to properties and infrastructure with increased maintenance required. ▪ It is important that any future development of the transport network does not have adverse impacts or lead to the degradation or sterilisation of the best and most versatile agricultural land, as this is important for the UK's self-sufficiency in food production. ▪ There is potential for soil loss as a result of developments, as well as the degradation of soil quality. ▪ Minerals are a finite resource, and materials will be required for any new transport infrastructure, with subsequent waste produced. ▪ There is a continued increase in renewable energy supplies across the region, of which needs to be managed efficiently to ensure the capacity requirements of this transition are met. Opportunities ▪ The SIP should aim to increase adaptation and resilience measures (including both engineering solutions and new smarter technologies), which are likely to be needed to keep the surface transport system running efficiently. ▪ The SIP should support the delivery of a transport network with greater use of public transport, powered by decarbonised energy sources. ▪ The SIP should encourage the implementation of circular economy principles in developments to reduce waste.

4.4 SEA Framework

4.4.1. An SEA Framework has been produced to guide the assessment process of the SIP. The framework (set out in **Table 4-2** overleaf) summarises the main sustainability issues in the Western Gateway STB region across each environmental topic, and the subsequent sustainability objectives and appraisal questions to be used to assess the SIP and reasonable alternatives.

Table 4-2 - Sustainability Appraisal Framework

SEA Topic	Proposed Objective	Supporting Appraisal Questions – Will the Western Gateway STB SIP…
Population and Human Health	**SEA1:** To increase the inclusivity, capacity and connectivity of the transportation network, especially in rural communities. **SEA2:** To protect and enhance physical and mental health and wellbeing through better access to public transport, supporting active travel and encouraging healthy lifestyles. **SEA3:** To promote safe transport through reducing collisions, improving safety and reducing crime across the transport network.	▪ Reduce deprivation and inequality across the Western Gateway STB region? ▪ Support the provision of everyday services more locally so that people do not have to travel as far - provision physical (fixed), mobile (non-fixed) and digital provision of services? ▪ Improve equality of opportunity amongst all social groups? ▪ Ensure that infrastructure / interventions are conscious of the needs of future population and population growth, including disadvantaged groups and minority communities? ▪ Consider the specific challenges of the region's rural communities? ▪ Encourage healthy lifestyles and reduce health inequalities? ▪ Promote access to health, social, recreational and leisure facilities for all sectors of the community? ▪ Provide and enhance community access to high quality open/green space and nature? ▪ Increase opportunity for active travel? ▪ Ensure that transport users feel safe, particularly after dark? ▪ Improve road safety and reduce the number of people KSI on the roads, particularly children from deprived background? ▪ Improve access for people with disabilities and protected characteristics? ▪ Provide opportunities for housing growth within the STB region?
Economy	**SEA4:** To provide greater connectivity across the region to support key sectors, attract inward investment and support economic success. **SEA5:** To support rural economies, attracting visitors and providing opportunities for prosperity. **SEA6:** To provide infrastructure that supports future sustainable housing growth	▪ Support the nationally important role of the Western Gateway STB economy? ▪ Support access to jobs, training and educational opportunities, particularly in rural areas? ▪ Improve reliable access to employment centres? ▪ Enhance the vitality and resilience of the town centred and retail centres? ▪ Improve reliability, accessibility and affordable of transport to access quality work? ▪ Ensure that infrastructure and opportunities for work and education keep pace with population growth? ▪ Promote good design that enhances the natural and built environment hence fostering healthy lifestyles, community cohesion and economic vitality? ▪ Support the movement of essential goods on suitable routes? ▪ Support the expected revised housing forecasts/new housing growth?
Biodiversity	**SEA7:** To protect, enhance and restore habitats, species and valuable ecological networks that contribute to ecosystem functionality and contribute to environmental and biodiversity net gain.	▪ Contribute towards the target of halting the decline in species abundance by 2030? ▪ Contribute to the UK commitment to protect 30% of land and sea for nature by 2030 (30by30)? ▪ Avoid impacts on designated and important biodiversity and provide net gains where possible, incorporating the mitigation hierarchy? ▪ Protect the integrity of designated sites including enhancement for SSSIs, Local Wildlife Sites and National Nature Reserves? ▪ Restore and enhance biodiversity in the region? ▪ Encourage opportunities to achieve at least 10% biodiversity net gain on interventions? ▪ Prevent habitat fragmentation and promote ecological networks, not prejudicing future improvements to habitat connectivity?
Landscape and Townscape	**SEA8:** To protect and enhance townscapes and landscapes, including the rural environment, town and city centres, and seascapes.	▪ Ensure that the Western Gateway's most valuable landscapes, townscapes and seascapes are conserved and enhanced? ▪ Improve the quality and condition of the townscape and landscape? ▪ Incorporate green infrastructure, natural landscape principles, and/or nature based solutions into design? ▪ Improve access to green spaces hence providing additional benefits in terms of health, well-being and social cohesion. ▪ Incorporate National Highways "The Road to Good Design" principles?

SEA Topic	Proposed Objective	Supporting Appraisal Questions – Will the Western Gateway STB SIP…
Historic Environment	**SEA9:** To preserve and enhance heritage resource including historic environment and archaeological assets (including designated and non-designated) and their unique settings in the region, improving access to heritage assets. **SEA10:** To improve access to heritage assets by a clean well connected transport system that fosters healthy lifestyles, community cohesion, and provide a "sense of place".	▪ Conserve and enhance the significance of buildings and structures of architectural or historic interested, both designated and non-designated? ▪ Improve the quality and condition of the historic environment? ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Enhance the setting of heritage assets through the development of schemes that reduce traffic noise, limit traffic movements within historic urban areas?
Water Environment	**SEA11**: To conserve, protect and enhance the water environment, water quality and water resources.	▪ Avoid the potential contamination of waterbodies and watercourses? ▪ Support the protection and enhancement, including ecological and chemical status, of water bodies? ▪ Support green infrastructure development or retrofit SuDS, and other nature-based solutions or grey infrastructure to help deliver water quality improvements alongside other co-benefits like attenuating water and flood control?
Air Quality	**SEA12**: To protect and enhance air quality by reducing emissions from the transport network.	▪ Reduce the need to travel? ▪ Encourage journeys to be made by sustainable means? ▪ Avoid any adverse effects on air quality and for people exposed to poor air quality? ▪ Improve air quality, particularly in areas of concern such as AQMAs and Clean Air Zones? ▪ Promote and facilitate the use of remote working, active travel, car-sharing, public transport and EVs ▪ Facilitate expansion and upgrades to existing EV infrastructure?
Climatic Factors	**SEA13**: Support the resilience of the transport infrastructure in the Western Gateway STB region to the effects of climate change, including flooding from fluvial, coastal and surface water sources. **SEA14:** Reduce the Western Gateway STB region's contribution to climate change from transport related greenhouse gas emissions	▪ Ensure transport infrastructure development in areas at risk of flooding, consider the likely future effects of climate change? ▪ Increase resilience of the transport infrastructure (new and existing) to the effects of climate change including extreme weather, flooding, heat and cold? ▪ Support new developments meeting or exceeding sustainable design criteria, including embodied carbon?
Material Assets	**SEA15**: To reduce the amount of waste produced and promote sustainable use of resources (including land). **SEA16:** To ensure that infrastructure is upgraded, well-maintained and resilient to future climate risks and support future population growth.	▪ Avoids the loss of potentially high-grade agricultural land? ▪ Minimise loss and negative effects upon geodiversity? ▪ Encourage the use of previously developed land? ▪ Promote a circular economy or waste minimisation at construction, operation and decommissioning phases? ▪ Minimise the loss of land valuable for biodiversity, carbon sequestration, water attenuation or similar? ▪ Enable long term use of assets to maximise economic value and minimise waste? ▪ Support the transition to renewable energy sources and manage capacity and distribution?

5 Assessment of SIP Options

5.1 Introduction

5.1.1. This assessment of the SIP Options is summarised below and presented in full in **Appendix E**.

5.1.2. The assessment considered 38 options that have been proposed, including public transport, mixed, road, freight, mass transit, and active transport options. A description of each option is provided in **Appendix E**.

5.1.3. A matrix approach has been used for the assessment which has used the significance criteria identified in **Table 3-1**. **Table 5-1** overleaf provides an overview on the performance of each SIP option against each SEA objective and **Table 5-2** shows the summary of significant effects based on each SEA objective.

5.2 Summary of Option Assessment Findings

Table 5-1 - Assessment of Options

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
DC-2024-MIX-004: South East Dorset Rural Mobility Pilot	++	++	++	++	++	0	--	--	--	?	?	0	--	++	--	?
GCC-2024-FODCSV-000: Long distance coach connections (cross-boundary airport coach links): Lydney-Chepstow-Bristol / Cheltenham-Bristol	++	0	0	++	0	0	--	--	--	?	?	++	--	++	--	0
NR - 2024 - PTI-016: Improvement of gateline capacity and customer facilities at Bournemouth station	0	0	++	?	0	0	?	?	--	?	0	0	?	0	0	++
NR-2024-PTI-011: Westbury station additional platform	0	0	0	++	0	0	?	?	?	?	0	0	?	0	0	?
DC-2024-MIX-003: Package of improvements to deliver strategic sustainable travel network connecting South East Dorset to the BCP conurbation	++	++	?	?	0	0	--	--	--	?	?	0	--	++	--	?
NR-2024-PTI-004: Dorset Metro Shuttle (Wareham to Brockenhurst)	0	0	0	?	0	0	--	?	--	?	?	0	--	0	0	0
GCC-2024-CSV-057011: Cheltenham Spa Station and cycle	0	0	0	?	0	0	?	?	--	?	0	0	?	0	0	0

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
access link to Gloucestershire Cycle Spine																
NR-2024-PTI-002: Salisbury Rail Service Enhancements	0	0	0	?	0	0	--	--	--	?	?	?	--	0	0	0
WC-2024-RD-005: A350/A303 Two Mile Down Junction Improvements	0	0	++	0	0	0	?	--	--	?	?	0	?	0	--	++
NR-2024-PTI-003: Heart of Wessex Line Service enhancement	0	0	0	++	0	0	--	?	--	?	0	0	?	0	0	0
GCC-2024-CSV-018: Strategic Interchange Hubs (Gloucester, Cheltenham & Ashchurch for Tewkesbury Rail Stations)	0	?	0	?	0	0	?	?	--	?	0	++	?	0	--	?
GCC-2024-CSV-056: Gloucester Rail Station	0	0	0	0	0	0	?	?	--	?	0	++	?	0	0	++
NR-2024-PTS-007: Bristol - Oxford direct train service	++	0	0	++	++	0	0	0	0	?	?	++	--	0	0	0
BCP-2024-FRT-001: Port of Poole Expansion, reopening of Hamworthy Branch Line and supporting access improvements	0	0	0	++	0	0	--	--	--	0	?	0	--	++	0	++
WEMCA-2024-PTI-007: Accessibility improvements to rail stations in WEMCA	++	0	++	0	0	0	?	0	0	?	?	?	--	0	0	++

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
GCC-2024-TKS-01003: Ashchurch for Tewkesbury Station & active travel corridor	++	?	0	++	++	0	?	?	--	?	0	0	?	++	0	?
NR-2024-PTI-001: Yeovil to Salisbury Service Improvement (Tisbury Loop)	++	0	0	0	0	0	0	0	0	?	?	0	--	0	0	0
DC-2024-MIX-002: A354 multi-modal corridor improvements south of Dorchester to Weymouth and Portland	++	++	++	0	0	0	--	--	--	?	?	0	--	++	--	++
WEMCA-2024-PTS-003: Rail service frequency enhancements to existing rail services in WEMCA	0	0	0	0	0	0	0	0	--	?	?	++	--	0	0	0
BCP-2024-PTI-001: All BCP rail stations to be made fully accessible	++	0	0	0	0	0	?	0	--	0	?	0	?	0	0	0
NR-2024-PTI-008: Gloucester station layout improvements	0	0	0	0	0	0	?	?	--	?	0	?	?	0	0	++
BCP-2024-MIX-004: Christchurch Town Centre sustainable access package	++	++	0	0	0	0	--	--	--	?	?	0	--	++	--	?
NR-2024-PTI-012: Bristol Temple Meads Platform 0	0	0	0	0	0	0	?	?	--	?	0	?	--	0	0	?
BCP-2024-MIX-001: A338 to Wessex Fields, Airport and	++	++	0	++	0	0	--	?	--	?	?	0	--	++	--	?

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
Aviation Business Park, sustainable access package scheme																
WEMCA-2024-PTI – 002: Bus corridor package in Bath	0	++	?	0	0	0	--	--	--	?	?	++	--	0	--	?
NR-2024-PTI – 010: Westerleigh rail Junction upgrade	0	0	0	0	0	0	--	?	--	?	?	0	--	0	0	++
WEMCA-2024-PTI-001: Bus corridor package in Bristol	0	++	?	0	0	0	--	?	--	?	?	++	--	0	0	?
WEMCA-2024-PTI-004: Portishead rail line (Metrowest - Phase 1)	++	0	0	0	0	0	--	?	--	?	?	++	--	?	--	?
GCC-2024-CSV-014: Mass Rapid Transit & Strategic Interchange (Gloucester / Cheltenham)	0	0	0	0	0	0	--	--	--	?	?	++	--	0	--	0
WEMCA-2024-AT-001-002-003-004: Walking and Cycling Network - West of England	++	++	?	0	0	0	--	--	--	?	?	++	--	++	--	?
BCP-2024-MIX-002: Bournemouth Travel Interchange	0	++	0	0	0	0	--	?	--	?	?	0	--	0	0	?
NR-2024-PTI-013: Additional passing loops for trains between Yate and Gloucester	0	0	0	?	0	0	--	?	--	?	?	0	--	0	--	++
BCP-2024-AT-001: Regional Cycle Network routes/schemes (BCP)	++	++	0	0	0	0	--	--	--	?	?	0	--	++	0	?

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
WEMCA-2024-PTI-009: Rail decarbonisation - Chippenham to Bristol Temple Meads via Bath Spa	0	0	0	0	0	0	--	--	--	0	?	++	--	++	0	++
WEMCA-2024-PTI-005: Henbury Rail line (Metrowest Phase 2)	0	0	0	0	0	0	--	?	--	?	0	0	--	0	--	?
WEMCA-2024-PTI-011: Four-tracking Bristol Temple Meads - Parson Street	0	0	0	0	0	0	?	?	--	?	0	++	--	0	--	++
NR-2024-PTI-014: Provision of traction power infrastructure to support removal of diesel-only passenger rolling stock	0	0	0	0	0	0	?	?	?	0	0	++	--	++	0	++
WEMCA-2024-PTS – 001: Bus service frequency and rural bus service improvements - WEMCA	++	0	0	0	++	0	--	--	--	?	?	++	--	++	0	0

Table 5-2 – Summary of Significant Effects – Preferred Options

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA1 (Population and Equalities)	15	0	0	The majority of preferred options are identified as likely to have negligible effects on population and equalities as while they improve connectivity and access, it is not of a scale that is likely to have significant effects across the Western Gateway STB Region. Further to this, they are less likely to address inequalities. Full details of which can be found in **Appendix E** to this SEA Report. Significant positive effects have been identified for 15 options in relation to population and equalities. This has been identified where options improve connectivity and access for current and future populations across the Western Gateway STB Region rather than a localised, or smaller area. Additionally, this has been identified where the option also improves access for those without access to a private vehicle, and those with a long term health condition or disability. Overall, the SIP will help improve the capacity and connectivity of the transport network which in turn will improve the movement of freight. This could have positive effects on equalities through enhanced movement of delivery vehicles to homes with elderly or disabled occupants.
SEA2 (Human Health)	10	0	2	The majority of preferred options are identified as likely to have negligible effects on human health as they do not include any active travel elements that are likely to significantly improve human health. Full details of which can be found in **Appendix E** to this SEA Report. Ten options are identified as likely to have significant positive effects on human health. This has been identified particularly for options including significant improvements to active travel that contribute to improving physical activity, as well as improving mental wellbeing and providing improvements to air quality, improving human health. Two options (GCC-2024-CSV-018, GCC-2024-TKS-01003) have resulted un uncertain effects upon human health, where there is potential for improvements to health but this is likely to be determined by individual scheme design.
SEA3 (Community Safety)	5	0	4	The majority of preferred options are identified as likely to have negligible effects on community safety and do not include any elements that are likely to significantly directly improve or reduce current safety levels. Full details of which can be found in **Appendix E** to this SEA Report. Five options (DC-2024-MIX-004, NR - 2024 - PTI-016, WC-2024-RD-005, WEMCA-2024-PTI-007, and DC-2024-MIX-002) are identified as likely to have significant positive effects on community safety due to directly addressing a current safety issue, for example, improving pedestrian crossing at road junctions. Four options (DC-2024-MIX-003, WEMCA-2024-PTI – 002, WEMCA-2024-PTI-001, and WEMCA-2024-AT-001-002-003-004) have resulted in uncertain effects upon community safety, where there is potential for improvements to safety but this is likely to be determined by individual scheme design.
SEA4 (Economy)	8	0	7	Significant positive effects have been identified for eight options as these provide improved access to regionally or nationally significant destinations and national or international gateways, overcome a severance or connectivity issue that unlocks regional benefits or resilience, facilitate movement along the Midlands – South Coast strategic corridor, and increase efficiency, reliability or sustainability of essential goods movement on strategic routes. Seven options have resulted in uncertain effects on economy as these options contribute in part to improving access, connectivity and essential goods movement, but not at a scale that is likely to be significant.
SEA5 (Rural Economies)	4	0	0	Four of the preferred options are identified as likely to have significant positive effects upon rural economies (DC-2024-MIX-004, NR-2024-PTS-007, GCC-2024-TKS-01003, and WEMCA-2024-PTS – 001). These options are all located within rural

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
				communities and provide improved access to employment, visitor attractions, and encourage tourism within rural communities. All other options are identified as likely to have negligible effects, full details of which can be found in **Appendix E** to this SEA Report.
SEA6 (Housing Growth)	0	0	0	No significant effects have been identified for SEA6 (Housing Growth) as a result of the preferred options. All effects have been considered to be negligible. Full details of the assessment can be found in **Appendix E** to this SEA Report.
SEA7 (Biodiversity)	0	22	13	The majority of preferred options are identified as likely to have significant negative effects upon biodiversity. This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of a nationally designated site). It is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on biodiversity. This will be dependent on potential pathways for impacts to travel along and a variety of information, some of which is not available at this stage, such as the precise design and layout of the option as well as level of mitigation to be provided. It is likely that when further information is available the significance of residual negative effects can be reduced. Potential uncertain effects have been identified for 13 options. These have been identified where despite not being located within 500m of a nationally designated site, there is potential for options to result in construction that may disturb local biodiversity, for example through construction noise or for protected species or priority habitats to be affected..
SEA8 (Landscape and Townscape)	0	14	19	Significant negative effects have been identified for 14 of the preferred options for landscape and townscape. This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of a nationally designated landscape). While it is recognised that there is potentially mitigation available to ensure that any residual effects are not significant, this is uncertain at this stage and a precautionary has been taken. Uncertain effects have been identified for the majority of options in relation to landscape and townscape as there is not information at this stage to determine a likely significant effect given the distance of the options from sensitive receptors.
SEA9 (Historic Environment)	0	33	2	The majority of options are identified as likely to have significant negative effects upon the historic environment. This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of an internally or nationally designated heritage asset). Two options (NR-2024-PTI-011 and NR-2024-PTI-014) have resulted in uncertain effects upon the historic environment. This has been identified where the option is located more than 500m and within 1km from a designated heritage asset. While it is recognised that there is potentially mitigation available to ensure that any residual effects are not significant, this is uncertain at this stage and a precautionary has been taken.
SEA10 (Access to Heritage Assets)	0	0	34	The majority of preferred options are identified as likely to have uncertain effects upon access to the historic environment. This has been identified where options are likely to contribute to improved connectivity and therefore indirectly enhance access to the historic environment and heritage assets across the region. However, there is also the potential to negatively affect access in the short term during construction but this is currently uncertain.
SEA11 (Water Environment)	0	0	26	The majority of preferred options have resulted in uncertain effects upon water environment. Taking a precautionary approach, an uncertain effect has been identified where options intersect or are within 100m of a waterbody that has been

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
				identified as having bad/ poor ecological quality (surface water body) and/ or poor chemical status (groundwater bodies).. It is likely that significant negative effects can be avoided through careful design and the incorporation of mitigation measures.
SEA12 (Air Quality)	14	0	4	A large proportion of the preferred options are identified as likely to have significant positive effects upon air quality. This has been identified where an option is located within 500m of an AQMA and has potential to help address poor air quality by contributing to reducing traffic or improving accessibility to sustainable transport modes, encouraging a modal shift away from private car use. Four options (NR-2024-PTI-002, WEMCA-2024-PTI-007, NR-2024-PTI-008, NR-2024-PTI-012) have resulted in uncertain effects upon air quality as these options are located within 500m of an AQMA; however, it is currently uncertain if these options will help to reduce traffic or improve accessibility to sustainable modes within the AQMA.
SEA13 (Climate Change)	0	28	10	The majority of preferred options are identified as likely to have significant negative effects upon climate change. Taking a precautionary approach, significant negative effects have been identified where the option is located either fully or partially within Flood Zone 3. Ten of the options have resulted in uncertain effects upon climate change due to their location either fully or partially within Flood Zone 1 or 2. It is recognised that there will be the potential to avoid and reduce the potential for significant effects through the detailed design of options and the incorporation of suitable mitigation measures.
SEA14 (Greenhouse Gases)	13	0	0	A large proportion of preferred options are identified as likely to have significant positive effects upon greenhouse gases. This has been identified where an option has a high likelihood of reducing annual regional transport carbon emissions and delivering the infrastructure/ conditions/ services necessary to prioritise a shift to low carbon modes. This has been identified for active travel and public transport schemes in particular. The majority of preferred options have resulted in negligible effects as these are anticipated to encourage the use of sustainable transport, but will not deliver the same scale of change, full details of which can be found in **Appendix E** to this SEA Report.
SEA15 (Material Assets)	0	15	0	Fifteen of the preferred options are identified as likely to have significant negative effects upon material assets. Taking a precautionary approach, this has been identified where the option could result in the loss of best and most versatile (BMV) agricultural land (Grade 1, 2 or 3a) or falls within a mineral safeguarded area. The remaining preferred options have resulted in negligible effects as these are not anticipated to result in any loss of BMV land, full details of which can be found in **Appendix E** to this SEA Report.
SEA16 (Infrastructure)	12	0	15	Twelve of the preferred options are identified as likely to have significant positive effects upon infrastructure as these options provide maintenance or upgrades to existing infrastructure within the Western Gateway STB Region, or they contribute to supporting the transition to renewable energy sources (such as NR-2024-PTI-014). The majority of options have resulted in uncertain effects where the option provides new infrastructure and some upgrading of existing infrastructure; however, it is currently unclear if they will provide climate resilience measures.

6 Assessment of Alternatives

6.1 Introduction

6.1.1. The SEA Regulations require an assessment of the plan and its “reasonable alternatives” taking into account the objectives and scope of the plan or programme. The assessment of reasonable alternatives does not need include all possible alternatives, but only those that are realistic.

6.1.2. The proposed alternatives include 24 options, which have the potential to come forward in the future and have therefore been assessed in the same level of detail as the proposed options. The summary assessment findings for the alternative options are outlined below (**Table 6-1** and **Table 6-2**) and the detailed assessment provided in **Appendix E**. A description of each alternative option is provided in **Appendix E**.

6.2 Summary of Effects – Alternative Options

6.2.1. The assessment of alternative options has resulted in a higher proportion of negligible effects compared to the preferred options and are less likely to sustainably support development. These effects have been identified for SEA1 (population and equalities), SEA2 (human health), SEA3 (community safety) and SEA12 (air quality) in particular.

6.2.2. This has largely been attributed to the nature of the preferred schemes in comparison to alternative schemes, with a higher proportion of road schemes included within the alternative options. Due to misalignment between the timetable for the SIP and the Road Investment Strategy as it transitions from Roads Period 2 to Roads Period 3, National Highways has been unable to provide specific information to support the evaluation of their road proposals as part of the SIP preparation. The detail provided for each alternative option is limited, and many of the proposals are still at an early stage of development. As a result, there is a high degree of uncertainty and risk associated with some of these proposals.

Table 6-1 - Assessment of Alternative Options

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
BCP-2024-MIX-003: Poole Town Centre sustainable access package + Poole Travel interchange	++	?	++	++	0	0	--	?	--	?	?	0	?	0	0	?
BCP-2024-MIX-005: A31 Capacity and safety improvements package	++	++	++	++	0	++	--	?	--	?	?	0	--	++	--	++
GCC-2024-CSV-001: M5 J10 (incl. new link road & A4019 widening)	0	0	0	++	0	++	?	?	--	?	?	0	--	?	--	++
GCC-2024-TKS-001: M5 Junction 9 and A46 (Ashchurch) Transport Scheme - Trans-Midland Trade Corridor	++	0	0	?	++	++	?	--	--	?	?	0	--	?	--	++
GCC-2024-CSV-013020: M5 J12 capacity and safety improvements and cycle link (B4008/Haresfield) to Gloucestershire Cycle Spine	0	?	++	?	++	++	?	?	--	?	0	0	--	?	--	++
NR-2024-PTI-009: Gloucester area re-signalling - enhanced rail renewal	0	0	0	++	0	0	--	?	--	?	?	0	--	0	0	++
A417 Missing Link	0	0	?	++	++	0	?	--	--	?	?	0	?	?	--	?
Potential small scheme: A36 Beckington Roundabouts	0	0	?	0	0	0	?	?	--	?	?	0	?	0	--	0
Potential small scheme: A36 Salisbury (Southampton Road Roundabouts)	0	0	?	?	0	0	--	?	--	?	?	0	--	0	0	0

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
Potential small scheme: A35 Dorchester Roundabouts	0	0	?	0	0	0	--	--	--	?	?	0	?	0	--	0
Strategic Renewal - M32 Eastville viaduct	0	0	0	?	0	0	?	?	--	0	?	?	--	0	0	0
Strategic Renewal - M5 J20-19 Bridge Cluster - Whynol Viaduct	0	0	0	?	0	0	?	?	--	0	?	0	--	0	0	0
NSC-2024-RD-001: A38 Major Road Network (MRN) scheme package	++	?	?	++	++	0	--	--	--	?	?	0	--	?	--	++
WEMCA-2024-TI-001: Bristol Temple Meads Capacity hub improvements as part of Bristol Temple Quarter	0	0	?	0	0	0	0	?	--	?	0	?	--	0	0	?
WEMCA-2024-PTI-008: Rail electrification - Filton Bank (between Bristol Parkway / Patchway to Bristol Temple Meads)	0	0	0	0	0	0	0	?	--	0	0	++	--	++	0	++
WEMCA-2024-PTS-004: South Wales Metro services between Cardiff and Bristol	++	0	0	++	0	0	--	?	--	?	?	++	--	++	--	?
WC-2024-RD-001: A350 Malmesbury Road Roundabout	0	0	++	++	0	0	?	?	?	?	0	0	?	0	--	++
WC-2024-RD-002: A350 Lackham to Melksham Bypass Improvements	0	0	++	++	0	0	0	?	--	?	0	0	--	?	--	++
WC-2024-RD-003: A350 Hagg Hill to Stoney Gutter	0	0	++	++	0	0	?	?	--	?	0	0	--	?	--	++

Option	SEA1 (Population and Equalities)	SEA2 (Human Health)	SEA3 (Community Safety)	SEA4 (Economy)	SEA5 (Rural Economies)	SEA6 (Housing Growth)	SEA7 (Biodiversity)	SEA8 (Landscape and Townscape)	SEA9 (Historic Environment)	SEA10 (Access to Heritage Assets)	SEA11 (Water Environment)	SEA12 (Air Quality)	SEA13 (Climate Change)	SEA14 (Greenhouse Gases)	SEA15 (Material Assets)	SEA16 (Infrastructure)
WC-2024-RD-004: A350 Westbury Bypass + Glenmore Link	0	0	?	++	0	0	--	?	--	?	?	0	--	?	--	?
WC-2024-RD-006: A36 Southampton Road/ Churchill Way	0	0	++	?	0	0	--	?	--	?	?	?	--	?	0	?
WC-2024-RD-010: Melksham Bypass	++	?	?	?	0	0	?	?	--	?	?	0	--	?	--	?
WC-2024-RD-011: M4 Junction 17 Improvements	0	0	++	++	0	0	--	?	--	?	0	0	--	?	--	?
WC-2024-RD-012: A350 Phase 4&5	0	0	?	++	0	0	?	?	?	?	0	0	--	?	0	?

Table 6-2 – Summary of Significant Effects – Alternative Options

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA1 (Population and Equalities)	6	0	0	The majority of alternative options are identified as likely to have negligible effects upon population and equalities. Full details of the assessment can be found in **Appendix E** to this SEA Report. Six alternative options have resulted in significant positive effects upon population and equalities. This has been identified for options that improve connectivity and access for current and future populations across the Western Gateway STB Region. Additionally, this has been identified where the option also improves access for those without access to a private vehicle, and those with a long term health condition or disability.
SEA2 (Human Health)	1	0	4	The majority of alternative options are identified as likely to have negligible effects upon human health. Full details of the assessment can be found in **Appendix E** to this SEA Report. Significant positive effects may occur for one alternative option (BCP-2024-MIX-005). This has been identified as the option includes improvements to active travel that contribute to improving physical activity, as well as improving mental wellbeing and providing improvements to air quality, improving human health. Uncertain effects may occur for four alternative options (BCP-2024-MIX-003,GCC-2024-CSV-013020, NSC-2024-RD-001, and WC-2024-RD-010). These effects have been identified where there is potential for improvements to health but this is likely to be determined by individual scheme design.
SEA3 (Community Safety)	8	0	9	The majority of alternative options are identified as likely to have negligible effects upon community safety. Full details of the assessment can be found in **Appendix E** to this SEA Report. Eight of the alternative options have potential significant positive effects upon community safety due to addressing a current significant safety issue, reducing the number of collisions and crime across the transport network. Nine of the alternative options have resulted in potential uncertain effects upon community safety. This has been identified where effects are likely to be determined by individual scheme design.
SEA4 (Economy)	13	0	7	The majority of alternative options have resulted in potential significant positive effects upon economy. This has been identified for options as these provide improved access to regionally or nationally significant destinations and national or international gateways, overcome a severance or connectivity issue that unlocks regional benefits or resilience, facilitate movement along the Midlands – South Coast strategic corridor, and increase efficiency, reliability or sustainability of essential goods movement on strategic routes. Seven options have potential uncertain effects on economy as these options contribute in part to improving access, connectivity and essential goods movement, but do not fully deliver these improvements.
SEA5 (Rural Economies)	4	0	0	The majority of alternative options have potential for negligible effects upon rural economies. Full details of the assessment can be found in **Appendix E** to this SEA Report. Significant positive effects are identified as likely for four alternative options (GCC-2024-TKS-001, GCC-2024-CSV-013020, A417 Missing Link, and NSC-2024-RD-001) in relation to rural economies. This has been identified where options located within rural communities, and are anticipated to result in improving accessibility to employment opportunities, as well as improving tourism and visitor economies in rural communities.

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA6 (Housing Growth)	4	0	0	The majority of alternative options have resulted in potential negligible effects upon housing growth. Full details of the assessment can be found in **Appendix E** to this SEA Report. Significant positive effects are identified as likely four alternative options (BCP-2024-MIX-005, GCC-2024-CSV-001, GCC-2024-TKS-001, and GCC-2024-CSV-013020) in relation to housing growth. This has been identified where options are directly anticipated to contribute to improving infrastructure for housing provision.
SEA7 (Biodiversity)	0	10	11	Ten of the alternative options have resulted potential for significant negative effects upon biodiversity. This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of a nationally designated site). Eleven alternative options have resulted in potential uncertain effects upon biodiversity. This has been identified where options are located between 500m and 1km away from a nationally designated site (SAC, SPA, Ramsar, SSSI and National Nature Reserve), or where effects are likely to be determined by individual scheme design.
SEA8 (Landscape and Townscape)	0	4	20	The majority of alternative options have resulted in the potential for uncertain effects upon landscape and townscape as a result of options that are located more than 500m away from a National Park or National Landscape but have potential to effect landscape and townscape setting. Significant negative effects have been identified as likely for four alternative options (GCC-2024-TKS-001, A417 Missing Link, Potential small scheme: A35 Dorchester Roundabouts, NSC-2024-RD-001). This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of a nationally designated landscape). While it is recognised that there is potentially mitigation available to ensure that any residual effects are not significant, this is uncertain at this stage and a precautionary has been taken.
SEA9 (Historic Environment)	0	22	2	The majority of alternative options have resulted in potential significant negative effects upon the historic environment. This is primarily as a result of taking a precautionary approach and in recognition of the presence of sensitive receptors (where an option intersects or is located within 500m of an internally or nationally designated heritage asset). Two alternative options (WC-2024-RD-001 and WC-2024-RD-012) have resulted in the potential for uncertain effects upon the historic environment. This has been identified where the option is located more than 500m and within 1km from a designated heritage asset, and there is potential for effects to occur depending on currently unknown scheme design.
SEA10 (Access to Heritage Assets)	0	0	21	The majority of alternative options have resulted in potential uncertain effects upon access to the historic environment. This has been identified where options are likely to contribute to improved connectivity and therefore indirectly enhance access to the historic environment and heritage assets across the region. However, there is also the potential to negatively affect access in the short term during construction, but this is currently uncertain.
SEA11 (Water Environment)	0	0	16	The majority of alternative options have resulted in potential uncertain effects upon water environment. This has been identified where options intersect or are within 100m of a waterbody that has been identified as having bad/ poor ecological quality (surface water body) and/ or poor chemical status (groundwater bodies), and have potential to affect water quality either during construction or operation, but this is likely to be determined by individual scheme design.

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA12 (Air Quality)	2	0	3	The majority of alternative options have resulted in potential negligible effects upon air quality. Full details of the assessment can be found in **Appendix E** to this SEA Report. Two of the alternative options (WEMCA-2024-PTI-008 and WEMCA-2024-PTS-004) have resulted in the potential for significant positive effects upon air quality. This has been identified where an option is located within 500m of an AQMA and has potential to help address poor air quality by contributing to reducing traffic or improving accessibility to sustainable transport modes, encouraging a modal shift away from private car use. Three alternative options (Strategic Renewal - M32 Eastville viaduct, WEMCA-2024-TI-001, and WC-2024-RD-006) have resulted in the potential for uncertain effects upon air quality as these options are located within 500m of an AQMA, however it is currently uncertain if these options will help to reduce traffic or improve accessibility to sustainable modes within the AQMA.
SEA13 (Climate Change)	0	19	5	The majority of alternative options have potential to result in significant negative effects upon climate change. These effects have been identified where the option is located either fully or partially within Flood Zone 3 and no drainage measures (such as sustainable drainage systems (SuDS) are currently proposed. Five of the alternative options (BCP-2024-MIX-003, A417 Missing Link, Potential small scheme: A36 Beckington Roundabouts, Potential small scheme: A35 Dorchester Roundabouts, and WC-2024-RD-001) have resulted in the potential for uncertain effects upon climate change due to their location either fully or partially within Flood Zone 1 or 2.
SEA14 (Greenhouse Gases)	3	0	12	Uncertain effects have been identified as potentially likely for the majority of alternative options. This has been identified where an option has a high likelihood to reduce annual regional transport carbon emissions from 6,250kt CO2e (2019) to net zero by 2050 or deliver the infrastructure/conditions/services necessary to prioritise a shift to low carbon modes. Three alternative options (BCP-2024-MIX-005, WEMCA-2024-PTI-008, WEMCA-2024-PTS-004) have resulted in potential significant positive effects upon greenhouse gases. This has been identified where an option has a high likelihood of reducing annual regional transport carbon emissions from 6,250kt CO2e (2019) to net zero by 2050 and delivering the infrastructure/conditions/services necessary to prioritise a shift to low carbon modes. This has been identified for active travel and public transport schemes in particular.
SEA15 (Material Assets)	0	15	0	The majority of alternative options have resulted in potential significant negative effects upon material assets. This has been identified where the option could result in the loss of best and most versatile (BMV) agricultural land (Grade 1, 2 or 3a) as a result of land take or falls within a mineral safeguarded area.
SEA16 (Infrastructure)	10	0	9	Ten of the alternative options have resulted in potential significant positive effects upon infrastructure as these options provide maintenance or upgrades to existing infrastructure within the Western Gateway STB Region, or they contribute to supporting the transition to renewable energy sources. Nine alternative options have resulted in potential uncertain effects where the option provides new infrastructure and some upgrading of existing infrastructure, however it is currently unclear if they will provide climate resilience measures.

7 Cumulative Effects

7.1 Introduction

7.1.1. The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Cumulative effects arise, for instance:

- Where several individual policies and sites have a combined effect on an objective; or
- Where several policies and sites each have insignificant effects but together have a significant effect.

7.1.2. The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed sites and policies and the sensitivity of the receiving communities and environment.

7.1.3. This section therefore presents the findings of the following:

- Consideration of how different interventions proposed within the SIP may interact and result in cumulative effects on a receptor (Intra-project effects); and
- How the SIP could interact with other plans, policies and projects in the surrounding area to have cumulative effects (Inter-project effects).

7.2 Intra-Project Effects

7.2.1. The SEA assessment of interventions identified potential intra-project cumulative effects and these are presented in **Table 7-2**. **Table 7-1** below outlines the key to the assessment of cumulative effect.

Table 7-1 – Key to Cumulative Effects

Effect	Key
Significant Positive cumulative effect	++
Significant Negative cumulative effects	--
Uncertain cumulative effects	?
No overall cumulative effects	0

Table 7-2 - Intra-Project Cumulative Effects Summary

SEA Objective	SIP Options	Summary
SEA1 (Population and Equalities)	**++**	There is potential for positive long term cumulative effects arising from the SIP options. They are likely to provide improved infrastructure for current and future populations within the Western Gateway STB region and beyond, working to increase the capacity of the transport network across the region. Additionally, the SIP options promote inclusive design, particularly through the options such as step-free access to rail stations (WEMCA-2024-PTI-007), all BCP rail stations to be made fully accessible (BCP-2024-PTI-001), improving access to all social groups inclusively. Overall, there is likely to be a significant long term positive cumulative effect. Overall, the SIP will help to improve the capacity and connectivity of the transport network, and this will improve the movement of freight. This could have positive effects on equalities through enhanced movement of delivery vehicles to homes with elderly or disabled occupants.
SEA2 (Human Health)	**++/?**	There is potential for negative cumulative effects on human health in the short term if multiple options were to be constructed at the same time within the same local area, resulting in increases in disturbance and nuisance and increased stress, negatively effecting human health. The phasing of development and project level mitigation to reduce impacts on air quality and noise are likely to ensure that residual effects are not significant. In the long term the options will include the implementation of new public, active travel, and road transport initiatives, supporting access to community facilities and services, such as health provisions and public leisure facilities. Therefore, this could result in significant positive cumulative effects on health and wellbeing. The development of additional active travel initiatives, including new walking and cycling projects and infrastructure to support active travel also contributes to anticipated positive effects on health and wellbeing through encouraging physical activity.
SEA3 (Community Safety)	**++**	It is assumed that all options will be built to a high standard of safety, particularly within public transport, mixed, and active transport options. There is also potential for long term significant positive cumulative effects from options providing public realm improvements, particularly if designing out crime principles are applied. Options that implement high quality design and landscaping can also help to generate a sense of pride and ownership within the community, resulting in the potential to reduce crime rates further.
SEA4 (Economy)	**++**	All options within the SIP will contribute to improving connectivity within the Western Gateway STB region and connecting to neighbouring regions. There are anticipated to be significant long term positive cumulative effects as a result of options improving accessibility to economic opportunities for both residents and investors. Additionally, options are anticipated to significantly improve access to the region's key tourism sites for visitors with a positive effect on the economy.
SEA5 (Rural Economies)	**++**	There are potential for long term significant positive cumulative effects on rural economies if multiple options, particularly South East Dorset Rural Mobility Pilot (DC-2024-MIX-004) and public transport services to rural areas were to come forward. This would contribute to improving rural connectivity and also improving visitor numbers to rural areas, boosting rural economies.
SEA6 (Housing Growth)	**++**	Cumulatively, it is considered that all of the options are likely to contribute to the enhancement of the transport network and improve capacity, which will enable future housing growth across the Western Gateway STB region.
SEA7 (Biodiversity)	**?**	There is the potential for negative cumulative effects on biodiversity if multiple large scale options were to come forward within the same area at the same time, resulting in increased disturbance upon local biodiversity. This is particularly likely if schemes are located within close proximity to designated sites. Depending upon the number and type of options selected and their proposed location, there is potential for a long term cumulative loss of land, which could lead to damaged and fragmented habitat connectivity.

		However, there is the potential for long term positive cumulative effects. Improving the efficiency of the transport network may cumulatively result in reduced disturbance to species and habitats within the Western Gateway STB region. Additionally, there is potential for the development to include green infrastructure that may provide biodiversity enhancements and comply with upcoming Biodiversity Net Gain requirements. Natural capital enhancements are possible through the connection of green spaces and protection of habitats linking population centres which may otherwise be lost or severed through a lack of maintenance or through other development.
SEA8 (Landscape and Townscape)	**?**	There is the potential for negative cumulative effects on landscapes and townscapes if multiple options were to come forward in close proximity to national parks or national landscapes or areas with high townscape values. During construction of options, there is the potential for disturbance to the setting and tranquillity of these areas, temporarily harming the visual amenity. The phasing of development would help to reduce the potential for short term negative effects during construction. In the longer-term, mitigation should help to reduce noise disturbance from road traffic and enhance the landscape and townscapes of Western Gateway. However, positive cumulative effects may arise due to good design of the proposed options, reductions in traffic congestion and noise through improvements to the network capacity, and improvements to the public realm. In combination, such improvements could enhance the landscape and townscape character over the long term.
SEA9 (Historic Environment)	**?**	There is the potential for negative cumulative effects on the historic environment if multiple options were to come forward in close proximity to heritage assets or within the setting of a heritage asset. During construction of these new options there is the potential for disturbance to the historic environment due to noise, vibration and temporary reductions in air pollution (dust soiling). During operation, these developments have the potential to negatively impact the setting of heritage assets if not sensitively designed. There is potential for historically sensitive design of options to fit in with the setting of any surrounding designated heritage assets, mitigating any long term negative cumulative effects. Additionally, reductions in traffic may lead to cumulative improvements to noise, improving the setting of heritage assets, as well as improvements to air quality, reducing the degradation of heritage assets. Potential cumulative effects on the historic environment are of particular interest in and around the three UNESCO World Heritage Sites located within the Western Gateway STB region i.e. the Dorset and East Devon Coast (also known as the Jurassic Coast); the City of Bath which also has a second UNESCO World Heritage designation as Great Spa Towns of Europe, and Stonehenge, Avebury and Associated Sites.
SEA10 (Access to Heritage Assets)	**++**	It is anticipated that all of the options are likely to contribute to improved connectivity and therefore cumulatively enhance access to the historic environment and heritage assets across the region.
SEA11 (Water Environment)	**?**	There is potential for negative impacts on water quality as a result of increases in surface water runoff and impacts on surface water and groundwater, particularly from physical alteration as a result of development from options. Water quality measures are likely to be specific to each development, but there may be cumulative benefits if implemented across a catchment.
SEA12 (Air Quality)	**++**	Temporary negative cumulative effects have the potential to arise during the construction phase, if multiple options with overlapping construction periods, were to come forward in the same area. Construction of these options may temporarily reduce the air quality and worsen air pollution from construction plant emissions, dust and construction traffic. However, it is assumed that dust and construction traffic will be mitigated against through implementation of a Construction Environmental Management Plan (CEMP). However, public transport, active travel and mixed proposals provide improved connectivity to sustainable transport modes, which will enable more people to utilise sustainable transport, instead of the use of a private car, improving air quality. Additionally, all of the options will result in improvements to the capacity and efficiency of the transport network, reducing congestion and vehicle idling times, improving air quality. Improvements to pedestrian and cycle connections may further reduce reliance on private cars and encourage low-emission sustainable and active travel, in turn providing health benefits.

SEA13 (Climate Change)	**?**	The addition of increased use of hard standing surfaces as part of the proposed options will increase surface water runoff. Therefore, a number of new developments could result in potential negative cumulative effects on flooding, particularly if developments are located within flood zone 2 or 3. However, there is potential that developments may include climate resilience measures, including sustainable urban drainage systems (SUDs) which will help to reduce overall flood risk and improve resilience. If climate resilience measures are included within multiple developments, there is potential for positive cumulative effects within a catchment.
SEA14 (Greenhouse Gases)	**?**	If multiple options were to come forward there is the potential for negative cumulative effects on GHGs, due to embedded carbon associated with the construction required for new developments. In the longer term, there is potential that if multiple developments were to arise, positive cumulative effects on GHGs may arise due to the improvement in infrastructure reducing the number of private vehicles on roads, as well as reducing congestion on the region's roads.
SEA15 (Material Assets)	**--**	There is potential for cumulative increases in waste produced by demolition, excavation, and construction resulting from options arising from the SIP, including loss of BMV agricultural land resulting from land take. However, there is potential to avoid and reduce significant effects during the detailed design stage of developments that may arise. There is potential for multiple developments to potentially avoid the loss of BMV agricultural land through detailed design where possible.
SEA16 (Infrastructure)	**++**	It is anticipated that all of the options are likely to contribute to improving the resilience of transport infrastructure within the Western Gateway STB region. The options also include the upgrading of existing infrastructure across the region, contributing to positive cumulative effects.

7.3 Inter-Project Effects

7.3.1. **Table 7-3** below outlines the sources of potential inter-cumulative effects, whilst **Table 7-4** details the cumulative effects identified for each of the SEA Topics in relation to these policies and plans. This uses the same key to effects as set out in **Table 7-1** above.

Table 7-3 - Sources of Inter-Cumulative Effects

Policy or Plan	Plan Details
Western Gateway Local Authorities Local Plans and Local Transport Plans	There are multiple Local Plans and Local Transport Plans within the Western Gateway STB, including: ■ Bath and North East Somerset Council, Local Plan (under development); ■ West of England Combined Authority, Bath and North East Somerset, Bristol, North Somerset, and South Gloucestershire Councils, Joint Local Transport Plan 4; ■ Bristol City Council, Local Plan; ■ North Somerset Council, Local Plan 2040; ■ South Gloucestershire, New Local Plan (under development); ■ Cheltenham, Gloucester and Tewkesbury Councils, Strategic Local Plan; ■ Cotswold District Council, Local Plan 2011 to 2031; ■ Forest of Dean District Council, Local Plan; ■ Stroud District Council, Local Plan 2015 to 2031; ■ Gloucester City Plan 2011-2031; ■ Bournemouth, Christchurch and Poole, Local Plan; ■ Dorset Council, Local Plan; ■ Wiltshire Council, Local Plan (under development); ■ Bournemouth, Christchurch and Poole, and Dorset Councils, Joint Local Transport Plan (under development); ■ Gloucestershire County Council, Local Transport Plan (2020-2041); and ■ Wiltshire Council, Local Transport Plan 4 (under development).
Neighbouring STB Strategies	There are four neighbouring Sub-national Transport Bodies to the Western Gateway STB, with neighbouring strategies, including: ■ Peninsula Transport Strategy; ■ Transport for the South East Strategy (under development); ■ Transport for the South East, Strategic Investment Plan; ■ England's Economic Heartland Transport Strategy; and ■ Midlands Connect Strategic Transport Plan.
Bristol Airport Expansion	Bristol Airport has begun consultation for expansion plans for the airport, including increasing passenger numbers to 15 million passengers per year by improving facilities and offering more flight options.

Bournemouth Airport Expansion	Bournemouth Airport have applied to BCP Council for the expansion of their terminal and the development of new buildings within their site to accommodate 2 million passengers.
Nationally Significant Infrastructure Projects (NSIPs)	There are 10 Nationally Significant Infrastructure Projects in the South West region that may interact with the SIP, including decided and pre-application developments including: ■ A303 Stonehenge ■ A303 Sparkford to Ilchester Dualling ■ A30 Temple to Higher Carblake Improvement ■ Hinkley Point C New Nuclear Power Station ■ Hinkley Point C Connection ■ Hinkley Point C New Nuclear Power Station Material Change 1 ■ A30 Chiverton to Carland Cross Scheme ■ Lime Down Solar Project ■ M5 Junction 10 Improvements Scheme ■ Xlinks Morrocco-UK Power Project
East West Rail	East West Rail is a nationally significant railway project which aims to deliver transport connections for communities between Oxford and Cambridge by: ■ Upgrading an existing section of railway between Oxford and Bicester ■ Bringing back a section of railway between Bicester and Bletchley ■ Refurbishing existing railway between Bletchley and Bedford ■ Building brand new railway infrastructure between Bedford and Cambridge This development has the potential to affect the SIP as this is occurring within the neighbouring Local Authority of Oxfordshire.

Table 7-4 - Inter-Project Cumulative Effects Summary

SEA Objective	Significance of Effect	Summary
SEA1 (Population and Equalities)	++	There is potential for significant positive long term cumulative effects to occur from the development of new transport schemes (NSIPs, East West Rail, Neighbouring STB Strategies, and Western Gateway Local Authority LTPs) alongside the SIP, which will improve access and connectivity to community facilities and services, including for people who cannot drive or do not have access to a private car. Additionally, there is potential for improved links with employment opportunities as a result of these developments.
SEA2 (Human Health)	++	There is potential for significant positive cumulative effects to arise if multiple transport developments come forward. These developments have potential to improve connectivity, as well as improving the public realm and open spaces as part of these developments resulting in positive effects on the health and wellbeing of the population in the region. Providing improved access to greenspace can provide better mental health and wellbeing outcomes, including reduced levels of depression, anxiety and enhanced quality of life, as well as helping to bind communities together, reduce loneliness, and mitigate the negative effects of air pollution and excessive noise. The development of new sustainable transport links is also likely to result in improvements to air quality, reducing private car emissions, and encourage physical activity along active travel routes, resulting in positive cumulative effects. However, there is potential for short term negative cumulative effects to arise from development if multiple large scale developments were to come forward at the same time, there is potential for increases nuisance and stress to the community of the Western Gateway STB Region.
SEA3 (Community Safety)	++	There is a potential for significant positive cumulative effects resulting from improvements to community safety if multiple schemes come forward that include improved safety measures, for example designing out crime principles and road safety improvements. Additionally, there is potential for improved feelings of safety on sustainable transport modes as a result of new developments. Improvements to the public realm as a result of developments are also likely to contribute to reducing crime and improving community safety.
SEA4 (Economy)	++	There is the potential for long term significant positive effects on the economy if multiple developments were to come forward, such as those connecting or within key employment areas. These developments will improve connectivity between employment centres and residential areas. Greater cumulative connectivity will result through investments in sustainable transport developments such as East West Rail. This will help communities to gain greater access to jobs, services and facilities. Access to activities provides the potentiality for people to participate in education, work, social, leisure, cultural, etc. greater connectivity to the Western Gateway STB Region may also bring about greater tourism opportunities.
SEA5 (Rural Economies)	++	There is potential for long term significant positive cumulative effects on rural economies if multiple developments were to come forward that connect rural areas, improving connectivity to these community. This is anticipated to provide rural communities with improved access to employment and services, as well as providing improved investment in rural areas and the potential for increased tourism, boosting local rural economies.
SEA6 (Housing Growth)	++	There is potential for long term significant positive cumulative effects upon housing growth from the development of improved infrastructure (transport and energy) across the Western Gateway STB Region, supporting increased resident numbers and meeting housing targets for the Local Authorities within the region.

SEA7 (Biodiversity)	**?**	There is potential for cumulative loss, damage or fragmentation of statutory and non-statutory sites and habitats if multiple developments, across similar timeframes were to come forward. Although it is assumed that protected species would be mitigated at a project level, there are wider impacts on biodiversity. Positive cumulative effects may result through BNG over multiple developments. These are likely to be driven by Local Plans and the requirement for 10% BNG in all developments. Further positive cumulative effects will result from the development of sustainable transport schemes (East West Rail). This will increase access to public transport modes, reducing the use of a private car, and therefore reducing greenhouse gas emissions, journey times and congestion, resulting in increased tranquillity and air quality.
SEA8 (Landscape and Townscape)	**?**	The provision of public realm improvements through the Local Plans and transport/STB plans could help to increase and improve the open space offering as well as the setting of the Western Gateway STB Region's townscape and landscape through positive design and reduced congestion. This may result in positive cumulative effects. However, multiple developments could result in a cumulative loss of open spaces, and obstructions to local landscapes such as National Landscapes. Additionally, there is potential for loss of tranquillity in these landscapes during construction, if construction were to occur in the same local authority areas during the same time.
SEA9 (Historic Environment)	**?**	There is the potential for temporary negative cumulative effects on the historic environment if multiple transport schemes and other developments were to come forward. During construction of these developments there is the potential for disturbance to the historic environment due to noise and air pollution. Positive cumulative effects may arise due to the historically sensitive design of the proposed developments to fit in with the setting of any surrounding designated heritage assets and Conservation Areas, including World Heritage Sites. Positive cumulative effects may also result from the development of sustainable transport schemes (East West Rail). This will increase access to public transport modes, reducing the use of a private car, and therefore reducing greenhouse gas emissions, journey times and congestion, resulting in increased tranquillity and setting of the historic environment.
SEA10 (Access to Heritage Assets)	**++**	There is potential for long term significant positive cumulative effects upon access to the historic environment due to transport schemes resulting in improved access to the historic environment, particularly World Heritage Sites, by the new transport schemes which could present opportunities to generate activity and vitality.
SEA11 (Water Environment)	**?**	There is potential for cumulative increase in surface water runoff and flood risk, and impacts on surface water and groundwater, particularly from physical alteration as a result of development. Drainage and water quality measures are likely to be specific to each development, but there may be cumulative benefits if implemented region-wide.
SEA12 (Air Quality)	**++/?**	Temporary negative cumulative effects have the potential to result during the construction phase, if multiple developments were to come forward. Construction of these developments may reduce the air quality through an increase in particulate matter and dust. Long term significant positive cumulative effects will result through the development of sustainable transport schemes (East West Rail). In combination with SIP options, this will increase access to public transport modes, reducing the use of a private car, and therefore reducing greenhouse gas emissions and improving air quality. Further positive cumulative effects will result from the reduction in journey times and congestion on the highway network.
SEA13 (Climate Change)	**?**	Climate change adaptation measures are likely to be specific to each development, but there may be cumulative benefits if implemented across multiple plans (as set out in Western Gateway Local Authority Local Plans). Temporary negative cumulative effects have the potential to result during the construction phase if multiple developments were to come forward. Construction of these developments may increase levels of greenhouse gas emissions through the embodied carbon associated with the construction and maintenance of the development. Investment in sustainable transport schemes, such as East

		West Rail, will have positive cumulative effects on climate change due to the reduction of private car use and therefore, greenhouse gas emissions. Positive cumulative effects have the potential to result if multiple developments were to come forward, due to the provision of public realm improvements and enhancements to biodiversity as part of the design. Further positive effects may result from low carbon and energy efficient design, which is resilient to the effects of climate change Climate change adaptation measures are likely to be specific to each development.
SEA14 (Greenhouse Gases)	**?**	There may be cumulative benefits from transport initiatives (including East West Rail and Western Gateway STB local authority transport plans, as well as neighbouring STB plans) and low carbon developments (as set out in Western Gateway STB local authority local plans) in reducing greenhouse gases, however, increased development is also likely to increase transport related greenhouse gas emissions, particularly where this leads to increases in vehicular traffic as well as embodied carbon due to development.
SEA15 (Material Assets)	**?**	There is potential for negative cumulative effects on material assets as a number of large-scale projects, such as East West Rail coupled with other development in the Western Gateway STB Region, could lead to a large cumulative loss of land, some of which may not be brownfield land. Additionally, there is potential for negative cumulative effects on waste as a number of large-scale projects could lead to a large cumulative use of resources and production and disposal of waste during construction. However, positive cumulative effects could arise if the majority of the of proposed developments are situated on brownfield sites. There is potential for developments to encourage the sustainable use of resources and encourage re-use and recycling initiatives to minimise waste going to landfill.
SEA16 (Infrastructure)	**++**	There is potential for long term significant positive cumulative effects if multiple improvements to existing infrastructure were to arise (such as through the Neighbouring STB Strategies), as well as the development of new infrastructure. Additionally, there is potential for cumulative improvements to climate resilience measures, depending on individual developments. The development of new infrastructure is also likely to result in positive cumulative effects upon supporting future population growth.

8 Mitigation, Enhancement and Monitoring

8.1 Mitigation and Enhancement Measures

8.1.1. The SEA Regulations require that measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan. The measures are known as 'mitigation' measures. Mitigation measures include both proactive avoidance of adverse effects and actions taken after potential effects are identified.

8.1.2. The mitigation measures proposed in **Table 8-1** are designed to avoid or reduce the effects identified as potentially negative through the assessment of the SIP options against the SEA Objectives. The table also includes enhancement measures, that aim to optimise positive impacts and enhance sustainability.

8.1.3. It is likely that significant negative effects can be avoided or reduced through the detailed design of proposed schemes through adherence to best design guidance. It is important to note that as the proposals are developed further by the organisations responsible for their delivery it is expected that best design and industry practice, and relevant legislative requirements will be considered from the outset.

8.1.4. This is important not only in terms of compliance but also as they have cost, programme and risk implications. Key legislative and policy requirements in the context of the SEA, without providing an extensive list, include:

- Conservation of Habitats and Species Regulations 2017 as amended (known as the Habitats Regulations). Under these regulations, competent authorities must carry out an assessment under the Habitats Regulations, known as a habitats regulations assessment (HRA), to test if a plan or project proposal could significantly harm the designated features of a nationally designated site
- Environmental Impact Assessment legislative requirements which are enacted in the UK through different legislative instruments depending on the nature of the scheme and consenting mechanism.
- Water Framework Directive assessment where applicable with its core aim being to protect the UK's water environments by preventing their deterioration and improving their quality.
- Biodiversity Net Gain legislative and policy requirements as part of the UK Government targets towards halting biodiversity loss and delivering enhancements.

Table 8-1 - Proposed Mitigation and Enhancement Measures

SEA Objective	Mitigation/Enhancement	Mechanism (as applicable)
SEA1: Population and Equalities	Inclusive mobility guidance should be adhered to ensure designs are accessible for everyone.	Project level design and assessment and EqIA as part of subsequent EIA / consenting process
SEA1: Population and Equalities SEA2: Human Health SEA3: Community Safety	Community safety, health and equalities should be considered in design, for example, active travel routes and pedestrian infrastructure, including linking new developments into existing infrastructure, lighting and other safety design considerations, materials used (contrasting colours, non-slip surfaces), accessibility for all including those with reduced mobility or disability, well-being, affordability of schemes, active travel.	Project level Community Safety Assessment, EqIA and HIA as part of subsequent EIA/ consenting process
SEA1: Population and Equalities SEA3: Community Safety	Active travel infrastructure should be accessible and inclusive. Cycleways should provide enough space for adapted cycles such as tricycles, tandems and wheelchair cycles. Consideration should be made for removing other barriers towards active travel for disabled people and low income groups, such as affordability. The council should work with charities and other representative groups to help lower the cost of adapted cycles. It is likely that other forms of sustainable travel will be prevalent in the future, such as electric scooters. Parking and facilities for these schemes should be accessible and not present physical barriers to users. The SIP should also support community engagement with various groups prior the development of transport infrastructure. Improvements to the pedestrian environment should ensure that spaces are inclusive, accessible and safe for disabled users including visually impaired users.	Project level design and assessment and EqIA as part of subsequent EIA/ consenting process Community engagement
SEA1: Population and Equalities SEA2: Human Health SEA3: Community Safety	Where options make provision for public realm improvements, there is a need for these spaces to be well designed and well lit, to ensure that they are safe and feel safe for all users, particularly after dark. Accessibility and safety could be improved in existing spaces by providing lighting, accessible signage, and auxiliary aids to people with reduced mobility. Accessible surfacing should be considered for wheelchair users and people with mobility restrictions. Opportunities for sensory stimulation should be maximised to ensure inclusive enjoyment of spaces.	Project level design and assessment as part of subsequent EIA/ consenting process Community engagement
SEA3: Community Safety	Development should incorporate designing out crime principles, particularly for those potential development sites located in areas with high levels of crime deprivation.	Project level design and assessment as part of subsequent EIA/ consenting process
SEA7: Biodiversity	Consideration needs to be given to the potential effects of construction of developments (noise, vibration and air pollution) on biodiversity. A Lighting Strategy should be prepared to minimise light spill onto retained or newly created habitat features. Consideration should be given to the movement of wild animals during scheme design, with design facilitating wildlife corridors where practicable.	Project level design and assessment (including noise assessments/ surveys) Lighting Strategy

SEA Objective	Mitigation/Enhancement	Mechanism (as applicable)
SEA7: Biodiversity SEA8: Landscape and Townscape SEA9: Historic Environment SEA15: Material Assets	In line with mandatory BNG requirements, transport interventions must implement biodiversity net gain and make use of the natural capital approach to ensure environmental net gain over and above that of decarbonisation. Development should avoid removing any habitats associated with green verges and should consider incorporating small scale green infrastructure. Where practicable, land take from green belt or high value land should be minimised.	Project level design and assessment
SEA7: Biodiversity SEA15: Material Assets	Interventions should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process.	Project level design and assessment
SEA7: Biodiversity SEA8: Landscape and Townscape	Interventions should consider impacts on international, national and local important sites (including sites such as SACs, National Landscapes, National Parks, SSSIs and Ramsar sites). This includes the potential impacts of noise, air and light pollution.	Project level design and assessment
SEA7: Biodiversity SEA8: Landscape and Townscape SEA2: Human Health	The incorporation of natural features such as tree planting, hedgerows and wildflower planting along walk/cycleways to enhance connections to nature and reduced stress levels, contributing to mental health and wellbeing benefits. Infrastructure schemes should incorporate design measures to lessen the impact on biodiversity and ensure biodiversity net gain. Where a transport project is likely to have a significant effect on the natural environment the avoidance-mitigation-compensation hierarchy applies, for example, less damaging alternatives should be sought with regards impacts to high value ecological and landscape receptors.	Project levels biodiversity net gain assessment
SEA8: Landscape and Townscape SEA9: Historic Environment	New developments should seek to maximise sustainability benefits from existing landscape, townscape and heritage assets by valuing them inherently and for the wider services they provide. Development proposals should not harm, and should seek to make a positive contribution to, the characteristics national landscapes and national parks.	Historic Landscape Characterisation Project level landscape and visual impacts assessments as part of subsequent EIA/ consenting process Heritage Impact Assessments
SEA9: Historic Environment	Promoters and designers should liaise closely with Local Authorities and Historic England to avoid or minimise negative effects, such as land take and light pollution, whilst seeking to maximise benefits, such as tranquillity. Where developments are being built and/or improved within, or close proximity to designated historic assets, visual effects assessment should be undertaken to determine magnitude of impact and possible mitigation.	Project level landscape and visual impacts assessments as part of subsequent EIA/ consenting process Heritage Impact Assessments
SEA9: Historic Environment	Development proposals with the potential to affect World Heritage Sites or their settings should be supported by Heritage Impact Assessments.	Project level landscape and visual impacts assessments as part of subsequent EIA/ consenting process Heritage Impact Assessments

SEA Objective	Mitigation/Enhancement	Mechanism (as applicable)
SEA8: Landscape and Townscape SEA9: Historic Environment	Sensitive design should be considered for any new developments within town centres to ensure positive effects on local heritage assets and landscapes.	Historic Landscape Characterisation Project level landscape and visual impacts assessments as part of subsequent EIA/ consenting process
SEA12: Air Quality	A Dust Management Plan should be compiled prior to demolition and construction of new options.	Project level Construction Environmental Management Plan (CEMP)
SEA13: Climate Change SEA14: GHG Emissions	Development should ensure design that is resilient to the current and future risks of climate change i.e. extreme heat, cold and precipitation. This could include the use of locally available, renewable, or reclaimed resources, as these are often more resilient. New developments should incorporate renewable energy generation methods, such as solar panels, to reduce the carbon emissions of the site.	Project level design and assessment as part of subsequent EIA/ consenting process
SEA13: Climate Change	Flood Risk Assessments should be undertaken for all developments located in Flood Zone 2 or 3. The inclusion of SuDS should be implemented where developments are located in flood zones.	Project level design and assessment as part of subsequent EIA/ consenting process
SEA13: Climate Change SEA14: GHG Emissions SEA11: Water Environment SEA15: Material Assets	Any form of construction and operation should be undertaken as sustainably as possible, making use of tools and processes, such as circular economy, waste hierarchy and should consider BREEAM and BREEAM Infrastructure. Sustainable design and construction techniques should be promoted, such as low energy lighting and opportunities for renewable energy regeneration. All interventions should consider climate change resilience and adaptation from early design. Where land take is required, preference should be given to brownfield land/ previously developed land and avoidance of the best and valuable land.	Project level design and assessment as part of subsequent EIA/ consenting process

8.2 Monitoring Measures

8.2.1. The SEA Regulations require that monitoring is undertaken on a plan so that the significant effects of implementation can be identified, and remedial action imposed. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final plan, and to measure the performance of the plan against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

8.2.2. The aim of monitoring is to check whether, once implemented, the plan or programme is having the significant effects that were predicted in the SEA, and to deal with any unforeseen problems.

8.2.3. Given the high level nature of the SIP and that the actual delivery and implementation of the proposals will be facilitated through other plans such as Local Transport Plans (LTPs) and by local transport authorities/ bodies, it is not considered reasonable to set out monitoring measures at this stage. Monitoring measures should be identified through the lower level LTPs and their accompanying SEAs and be aligned with ongoing monitoring carried out by the local transport authorities/ bodies.

9 Next Steps

9.1.1. In accordance with the SEA Regulations, the SEA Report was made available alongside the draft SIP and informed its development.

9.1.2. Once the SIP is adopted, an SEA Post-Adoption Statement will be produced to document the process and will include a record of the comments received on both the SIP and SEA Environmental Report, and the actions taken as well as setting out how the SEA has influenced the development of SIP.

9.1.3. An indicative timetable of the remaining stages of the SEA and SIP have been included in **Table 9-1** below.

Table 9-1 – Indicative Local Plan and SA Timetable

SEA and SIP Stages	Timescales
SIP Adoption	March 2025
SEA Post Adoption Statement	April 2025

Appendix A

Assurance Checklist

Table A-1 sets out the quality assurance checklist, taken from the SEA Regulations.

Table A-1 - Quality Assurance Checklist

SEA Regulations	Summary
Preparation of Environmental Report (Regulation 12)	
Preparation of an environmental report that identifies describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme (regulation 12(2)).	The Environmental Report presents an assessment of the SIP's options in Section 5 and Appendix E. Alternative options have been assessed within Section 6 and Appendix E.
The report shall include such of the information referred to in Schedule 2 as may reasonably be required, taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in the process to avoid duplication of the assessment (regulation 12(3)). Information may be provided by reference to relevant information obtained at other levels of decision-making or through other EU legislation (regulation 12 (4)).	Please refer to the comments provided below in this table in relation to Schedule 2.
When deciding on the scope and level of detail of information to be included in the environmental report the consultation bodies should be consulted (regulation 12 (5)).	A Scoping Report was produced and sent to the statutory bodies in October 2024 for review and comment. The responses received and how they have been taken into account are presented in Appendix C of the Environmental Report.
Information referred to in Schedule 2	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	The purpose and contents of the SIP, including vision and objectives, is provided in Section 2 of the Environmental Report. While the scoping report in Appendix B outlines the review of other plans/ programmes.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	The relevant aspects of the current state of the environment are in Section 4 and Appendix B, along with the likely evolution of the baseline without the implementation of the SIP.
c) The environment characteristics of areas likely to be significantly affected.	The environment characteristics of areas likely to be significantly affected are presented in Section 4 and Appendix B of the Environmental Report.
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 2009/147/EC (Conservation of Wild Birds) and 92/43/EEC (Habitats Directive).	Existing environmental problems are set out in Section 4 and Appendix B of the Environmental Report. This includes designated sites.
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Appendix E of the Environmental Report present a list of other plans/ programmes and legislation applicable to the SIP. These plans and their objectives have been taken into account during the development of the SEA Appraisal Framework (Section 4.4).
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscapes and the interrelationship between the above factors. These effects should include secondary,	The SEA framework presented in Section 4 of the Environmental Report covers all of the issues referred to in the SEA Regulations.

cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.	The assessments of the SIP include consideration of cumulative (intra- and inter-plan) effects (in Section 7) as well as the duration and nature of effects.
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Mitigation measures are identified in Section 8.1 of the Environmental Report.
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	The reasons for selecting alternatives dealt with has been outlined in Section 6 of the Environmental Report.
i) A description of measures envisaged concerning monitoring in accordance with regulation 17.	Monitoring measures are presented in Section 8.2. They are set out for SA objectives where uncertain effects have been identified.
Consultation procedures (regulation 13)	
As soon as reasonably practicable after their preparation, the draft plan or programme and environmental report shall be sent to the consultation bodies and brought to the attention of the public, who should be invited to express their opinion. The period within which opinions must be sent must be of such length as will ensure an effective opportunity to express their opinion.	The Environmental Report was consulted on alongside the draft SIP for public consultation from December 2024 to January 2025.
Information as to adoption of plan or programme (regulation 16)	
As soon as reasonably practicable after the plan or programme is adopted, the consultation bodies, the public and the Secretary of State (who will inform any other EU Member States consulted) shall be informed and the following made available: ▪ the plan or programme adopted ▪ the environmental report	This requirement does not need to be addressed at this stage in plan-making.
Monitoring (regulation 17)	
Monitoring of significant environmental effects of the plan's or programme's implementation with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action (regulation 17 (1)). Monitoring arrangements may comprise or include arrangements established for other purposes (regulation 17 (2)).	While the requirements under regulation 17 relate to post adoption of the plan, recommendations have been made earlier in this table as to how the Environmental Report can be strengthened with regard to monitoring.

Appendix B

Scoping Report

Appendix C

Consultation Comments

Table C-1 outlines the comments received from SEA Statutory Consultees in relation to the Scoping Report, while **Table C-2** outlines the comments received from both the public and statutory consultees in relation to the SEA, EqIA and HIA.

Table C-1 - Scoping Consultation Comments

Consultee	Comment	In reference to	Action required?	By Whom	Summary Action Taken/ Required
Natural England	Thank you for your consultation on the above. Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development. Please see below Natural England's advice on the SEA Scoping Report.	Scoping Report	No	N/A	General comment - no action required.
Natural England	**Baseline Information** Natural England has not reviewed the baseline information in detail. We have no comments on the accuracy or relevance of the data provided.	Scoping Report - Section 5	No	N/A	Noted.
Natural England	**SEA Appraisal Framework** The following comments are provided on the SEA Appraisal Framework: • **Population and Human Health** Supporting Appraisal Questions ▪ We welcome the inclusion of the following questions in the appraisal framework. o Provide and enhance community access to high quality open/green space and nature o Encourage healthy lifestyles and reduce health inequalities? • Green spaces support active lifestyles and provide opportunities for nature connection that benefit physical and mental health, wellbeing, and quality of life. Green infrastructure also helps to mitigate health risks such as urban heat stress, noise pollution, flooding, and poor air quality.	Scoping Report - Section 6	No	N/A	Noted.
Natural England	• **Biodiversity** o Supporting Appraisal Questions ▪ In addition to question, Contribute towards the target of halting the decline in species abundance by 2030?, a further question could be included in the framework which considers whether the plan contributes the UK commitment to protect 30% of land and sea for nature by 2030 (30by30). ▪ Minimise impacts on designated and important biodiversity and provide net gains where possible? • This should be revised to avoid impacts on designated and important biodiversity and provide net gains where possible? • Designated and important biodiversity should be defined to provide clarify on assessment of this question. ▪ Prevent habitat fragmentation and promote ecological networks? • We would welcome if this question could be expanded to include not prejudicing future improvements to habitat connectivity.	Scoping Report - Section 6	Yes	WSP	WSP will include an additional appraisal question referring to the UK commitment to protect 30% of land and sea for nature by 2030. WSP will amend the wording of 'Minimise impacts on designated and important biodiversity and provide net gains where possible?' to state 'avoid impacts on designated and important biodiversity and provide net gains where possible?'. WSP will also amend the wording of 'Prevent habitat fragmentation and promote ecological networks?' to include not prejudicing future improvements to habitat connectivity.

Natural England	• **Landscape and Townscape** o Supporting Appraisal Questions ▪ Incorporate green infrastructure and/or natural landscape principles into design? • We welcome the inclusion of this question in the appraisal framework. Natural England have created a Green Infrastructure Framework which includes 15 principles which define good green infrastructure and a Green Infrastructure Planning and Design Guide which provides evidence based practical guidance on how to plan and design good green infrastructure. We would welcome if this question could be expanded to include incorporation of nature-based solutions (e.g. For water management, climate adaptation, and air quality) into design	Scoping Report - Section 6	Yes	WSP	WSP will amend this supporting question to include reference to nature-based solutions.
Natural England	• **Water Environment** o Supporting Appraisal Questions ▪ Reduce the potential contamination of waterbodies and watercourses? • This should be revised to Avoid the potential contamination of waterbodies and watercourses? ▪ Support green infrastructure development or retrofit SuDS, and other nature-based solutions or grey infrastructure to help deliver water quality improvements alongside other co-benefits like attenuating water and flood control? • We welcome the inclusion of this question in the SA framework	Scoping Report - Section 6	Yes	WSP	WSP will amend the wording of this supporting question to state 'avoid'.
Natural England	• **Material Assets** o Supporting Appraisal Questions ▪ A further question should be added which considers the potential impact of the plan on geodiversity ▪ Minimise the loss of potentially high-grade agricultural land? • A more appropriate question would be Avoids the loss of Best and Most Versatile Agricultural Lane?	Scoping Report - Section 6	Yes	WSP	WSP will include an additional appraisal question considering the impact of the plan upon geodiversity. WSP will amend the wording of the supporting question to remove 'minimise' and state 'avoids the loss of Best and Most Versatile Agricultural Land?'
Natural England	**Appendix A – Review of Plans, Policies and Programmes** 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 • Local Nature Recovery Strategies • Rights of Way Improvement Plans • Shoreline management plans • Coastal access plans • River basin management plans • National Landscape/AONB and National Park management plans. • Relevant landscape plans and strategies.	Scoping Report - Appendix A	Yes	WSP	WSP have reviewed Appendix A to ensure the applicable policies have been included.

Environment Agency	Thank you for consulting the Environment Agency on the Strategic Environmental Assessment (SEA) Scoping Report for the Western Gateway Sub-National Transport Body (STB) Strategic Investment Plan (SIP), dated October 2024. We consider the SEA Scoping Report to be comprehensive with the matters that are included. In particular, we are pleased to see the following key messages that are given in the Policy Review chapter 4.2 of the Scoping Report.	Scoping Report	No	N/A	General comment - no action required.
Environment Agency	**Water environment** • Water resources in the STB region are under increasing pressure from a growing population, climate change and environmental needs. • Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest flood risk. • Any 'essential infrastructure' proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood. • There is a need to: o Protect and enhance surface and groundwater quality and ensure that water quality is improved or maintained where possible; and o Avoid development in areas prone to flooding.	Scoping Report - Section 4	No	N/A	General comment - no action required.
Environment Agency	**Biodiversity** • The UK Government has committed to halting the decline in species abundance by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042. • It has also committed to protect 30% of our land and sea for nature through the Nature Recovery Network and enhanced protections for marine protected areas. • There is a need to: o Identify opportunities for green infrastructure provision, recognising the multiple functions that green infrastructure provides to the area and linking into regional and national green infrastructure networks; o Protect and enhance biodiversity, including designated sites, priority species, habitats and ecological networks; o Minimise the impact on biodiversity and ensure net gain wherever possible; o Maintain and enhance ecosystems and their services; and o Improve the long-term sustainability of ecological and physical processes that underpin the functioning of ecosystems.	Scoping Report - Section 4	No	N/A	General comment - no action required.

Environment Agency	Air Quality, Greenhouse Gases and Climate Change • The UK Clean Air Strategy outlines plans to reduce emission of pollutants and improve air quality by the year 2030. • All local authorities within the STB region have declared a climate emergency, pledging to take action to become carbon neutral in their Council operations by 2030, with the exception of Dorset Council who have pledged to become carbon neutral by 2040. These councils are also committed to helping their wider areas to achieve carbon neutrality. • National Highways and Network Rail have both pledged to become net zero across the whole network by 2050. • 2050 has also been agreed as the target date to achieve net zero carbon from transport in the Western Gateway Strategic Transport Plan. • Take all possible action to mitigate climate change, while adapting to reduce its impact. • Avoid increased vulnerability to the range of impacts arising from climate change. • There is a need to: o Ensure that air quality is maintained (through net maintenance) or enhanced and that emissions of air pollutants are kept to a minimum; o Reduce emissions of greenhouse gases that may cause climate change; o Increase energy efficiency and move towards a low carbon economy; o Ensure that infrastructure is resilient to the impacts of climate change; and o Support the transition to electric vehicles, especially in light of the ban on new petrol and diesel vehicles in the UK by 2035.	Scoping Report - Section 4	No	N/A	General comment - no action required.
Environment Agency	We would expect any transport schemes, plans or strategies to address these matters and the others that are included in the SEA report.	Scoping Report	Yes	Western Gateway STB WSP	WSP will assess the proposed options arising from the SIP and will provide recommendations to Western Gateway STB. Western Gateway STB will consider these recommendations and implement within any transport schemes arising from the SIP.
Natural England	Thank you for consulting us on the SEA Scoping Report. I hope you find our comments below helpful. I've liaised with our National team and have taken the report section by section.	Scoping Report	No	N/A	General comment - no action required.
Natural England	Firstly however, I would draw you attention to the national Biodiversity Net Gain policy and legislation (Biodiversity net gain - GOV.UK) which is referred to only briefly in the report, but also the requirement to consider Local Nature Recovery Strategies (Local nature recovery strategies - GOV.UK). All local authorities that this report affects will have an approved LNRS or one that is in development.	Scoping Report	Yes	WSP	WSP have considered Biodiversity Net Gain policy within the scoping report, and will consider this within the upcoming SEA assessment. Additionally, Local Nature Recovery Strategies have been reviewed and considered for the Western Gateway STB Region.

Natural England	• **5.4.3** – the figures relating to the number of Habitats Sites recorded in Wessex are not correct. The report suggests there are 200 or 300 SAC or RAMSAR sites in the 4 counties that make up our Wessex area. We don't have that number in the entirety of England, so these figures need checking. It may be there has been some confusion and the total number of designated sites have been included.	Scoping Report - Section 5	Yes	WSP	WSP will review the number of sites referenced in paragraph 5.4.3 to ensure this is correct.
Natural England	• **5.4.4** – I have not seen the mapping of all of the above from 5.4.3 in Appendix C. These maps will need checking.	Scoping Report - Section 5	Yes	WSP	WSP will review the number of sites referenced in 5.4.3 and also figures within Appendix C to ensure the number and location of sites is correct.
Natural England	• **5.4.8** – this is not a comprehensive list of our national Landscapes. They mention important ecology in the Mendips and Cotswolds only. Yet in a later chapter they do cover the longer list of National Landscapes in Wessex. We would argue all the National Landscapes in the area the report covers are important for nature. We would suggest this paragraph is removed and the Landscape chapter is reinforced to cover all Wessex National Landscapes.	Scoping Report - Section 5	Yes	WSP	A comprehensive list of national landscapes can be found in Section 5.5 and Appendix B to the scoping report. WSP will amend wording in paragraph 5.4.8 to remove reference to a limited number of national landscapes.
Natural England	• **5.7 + 5.8** – Water and Air Quality (AQ/WQ) are tremendously important for designated sites, and are likely to be the major impact pathways upon biodiversity from the developments coming from this plan. AQ/WQ needs to be cross referenced and mentioned in this plan. It is a common shortcoming that we see AQ Chapters focus on human health, WQ Chapters focus on SUDs and flooding. There are a raft of important and sensitive wetland habitats in Wessex that could potentially be impacted by this plan.	Scoping Report - Section 5	Yes	WSP	WSP will consider indirect effects of air quality and water quality upon biodiversity when undertaking the SEA Assessment of the SIP.
Natural England	• Biodiversity Net Gain (BNG) only gets mentioned once in the main document. It gets inferred to a lot, but we think feel needs to be made clearer and needs its own section. We welcome its inclusion in the policy provision at the end of the report, but this is a key component for us on this project and, given its new legislative position, BNG needs to be front and centre.	Scoping Report	Yes	WSP Western Gateway STB	WSP have reviewed the scoping report and mentions to biodiversity net gain. It is included within the baseline under 'biodiversity', and as an appraisal question within the SEA Appraisal Framework. All options within the SIP will be assessed using these appraisal questions and any improvement to biodiversity net gain will be included within the main SEA report. As Biodiversity Net Gain is mandatory, any options arising from the SIP will be subject to this requirement. This will be managed by Western Gateway STB.
Natural England	• **SEA7** – this section doesn't go far enough in seeking the protection of designated sites. It does talk about minimising impacts and protecting integrity, but we feel the mitigation hierarchy needs to be referred to. Any projects relating to this strategy should look to avoid, then mitigate and if not possible compensate for any impacts that occur. This is particularly important for us on long linear NSIP type development. Given the scoping stage we would suggest that all options are considered to Avoid impact o	Scoping Report - Section 6	Yes	WSP	WSP will include reference to the mitigation hierarchy within the appraisal questions for SEA7 to ensure any significant effects are mitigated against.

	designated site first e.g. to run an aviation fuel pipeline or trainline around a site rather than through. We would like to see reference to the well-established mitigation hierarchy approach in SEA7.				
Natural England	• **SEA11 and SEA12** - See point above on 5.7 and 5.8. The resultant policies for AQ and WQ don't make any reference to our work. SEA11 and SEA12 – could cross reference to biodiversity issues as this will be the key impact pathways for us to consider.	Scoping Report - Section 6	Yes	WSP	WSP will consider indirect effects of air quality and water quality upon biodiversity when undertaking the SEA Assessment of the SIP.
Natural England	• **Appendix A** – is a comprehensive list of documents they are considering, however we feel one document could usefully be included now. Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations - NEA001	Scoping Report - Appendix A	Yes	WSP	WSP will review Natural England's advice document and consider it's applicability to the SEA Scoping Report.
Natural England	• **Appendix B** – see comment above, re designated site figures. All figures need a proper fact check. We think some of them are better here, but problems with all counties data.	Scoping Report - Appendix B	Yes	WSP	WSP will review the number of sites referenced in Appendix B and also figures within Appendix C to ensure the number and location of sites is correct.
Historic England	thank you for providing Historic England with the opportunity to comment on the draft scoping report. I hope the following suggestions will help inform minor adjustments to provide the basis for a robust assessment of the likely significant environmental effects of the strategic investment plans on the historic environment. My comments are made within the context of Historic England advice prepared to help those undertaking strategic environmental assessments; you may, of course, be familiar with.	Scoping Report	No	N/A	General comment - no action required.
Historic England	**Vision and Objectives** "A resilient transport network that works for everyone and is fit for the future, helping people and businesses throughout the Western Gateway to thrive while protecting our environment." To support this Vision, we would anticipate your SEA will flag that an associated 'environmental' objective is required. Perhaps similar to the following, To improve environmental conditions where they currently exists and ensure new proposals are well designed, fit within their context and enhance a sense of place. This would accord with National Highways The Road to Good Design.	Scoping Report - Section 2	Yes	WSP	WSP will assess the SIP and propose any additional recommendations to the SIP and Western Gateway STB, helping to minimise any negative effects arising from the SIP and its options.
Historic England	**Key messages from policy review** We would strongly encourage reference to the Road to Good Design in your policy review and flag its key principles. In relation to the Historic Environment, page 9, we would encourage reference to the importance of a potential impact on the sense of place, character and experience of the historic environment. Policy review should pick up on the drive to recognise the opportunity for good design that	Scoping Report - Section 4	Yes	WSP	WSP will review the Road to Good Design and include within the Scoping Report, Appendix A and Section 4, with particular reference to the historic environment.

	demonstrates a sensitivity to landscape and heritage that seeks to enhance the place and build a positive legacy for the future.				
Historic England	**Baseline** With regard to the baseline, could you please refer to Bath's second UNESCO World Heritage designation (Great Spa Towns of Europe) that was inscribed in 2021. We would also stress the importance of engaging local authority heritage expertise to ensure that key information from their Historic Environment Records (HERs) is available to you and to enable their local knowledge to inform a contextual, responsive and creative landscape led approach.	Scoping Report - Section 5	Yes	WSP	WSP will amend Section 5.6 to include Bath's second UNESCO World Heritage Designation. Historic Environment Records are considered when undertaking the SEA Assessment of options to ensure any likely significant effects on the historic environment are captured and mitigated against.
Historic England	**Environmental Issues and Opportunities** Historic England welcomes your reference to the importance of a landscape-led design approach (page 9 and 10), and we hope this will be one of your SEA recommendations. We welcome reference to the challenges, issues and opportunities for the historic environment but would encourage the relationship of good design to successful outcomes; again, The Road to Good Design is pertinent. Reference to the importance of restrained road design is also important; we all know the risk of 'over engineering', rather than vision led design. Whilst functional, new road design should respond positively and elegantly to the context. It can enhance a sense of place and add to what we have inherited, particularly through the use of appropriate materials and traditions, but does not make unnecessary superficial or superfluous visual statements.	Scoping Report - Section 5	Yes	WSP	WSP will review and include the Road to Good Design guidance within section 5.11, Section 4 and Appendix A.
Historic England	**Paragraph 5.6.11.** It may be appropriate here to refer to NPPF footnote 72, Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.	Scoping Report - Section 5	Yes	WSP	WSP will add an additional footnote to include non-designated heritage assets of archaeological impacts.
Historic England	**Paragraph 5.6.11.** Perhaps remove the reference to smells as this tends to trivialise the point. The NPPF Glossary defines setting, or GPA3 if one is required.	Scoping Report - Section 5	Yes	WSP	WSP will amend the wording of paragraph 5.6.12 to remove reference to smells.
Historic England	**Appraisal Framework** Historic England notes the proposed Objectives which should help to enable a positive assessment process. Re Landscape and townscape. It may be appropriate here to refer to the whether or not the proposal could be well integrated with the landscape/townscape (landscape-led design). Perhaps add an additional Bullet point • Incorporate the Road to Good Design principles?	Scoping Report - Section 6	Yes	WSP	WSP will include an additional appraisal question supporting SEA8 to include the Road to Good Design principles.

Table C-2 - Consultation Comments directly related to the SEA, HIA and / or EqIA from Public Consultation (December 2024 to January 2025)

Consultee	Consultation Question	Comment	In reference to	Action required?	By Whom	Summary Action Taken/ Required
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Big long term projects are vulnerable to significant changes in policy, the economy etc	SEA Report	Yes	WSP	The SEA considers the potential changes to long term projects as a result of economic and policy changes throughout the project lifetime. Potential changes to the state of the environment in the Western Gateway STB Region have been considered within the Future Baseline (Appendix B to the main SEA Report). A note to this effect has been added in paragraph 4.1.2 of the SEA Environmental Report
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	It seems like, noise, light and water pollution are missing.	SEA Report	No	N/A	Noted. These topics have been considered within the SEA Assessment.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	It will be important that biodiversity impacts are properly considered at project level as not properly assessed here.	SEA Report	No	N/A	As explained in the document, this an SEA report, therefore the aim is not to provide detailed assessment of individual project impacts. The need for project level assessment has been identified within the SEA Report.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	The impact on the care economy has been overlooked- Carers travel on foot more. Caring responsibilities often require them to make multiple short journeys during a day (for example, to drop children off at school, visit an elderly parent and shop for food) and to travel with dependents. But public transport systems tend to be built on the model, which carry people in and out of town centres, and so are much more suited to longer commuting journeys instead of multiple short journeys.	HIA EqIA	No	N/A	The HIA and EqIA have considered carers within their assessments of SIP Options as appropriate at this strategic level.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Embodied carbon is missing from SA.	SEA Report	No	N/A	The SEA has considered embodied carbon within the assessment of Climatic Factors. The SEA framework includes a supporting appraisal question on embodied carbon within Table 4-2.
Public Response	Do you think there are any impacts we have overlooked, or have any	What is the impact for region if we do nothing?	SEA Report	No	N/A	The SEA has included the potential for the future evolution of the baseline without the implementation of the SIP within the SEA Scoping Report. This is

	other comments on the sustainability appraisal?					included as Appendix B to the SEA Report.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	not considered the negative impacts on the environment from new housing that the government will require following any transport improvement.	SEA Report	No	N/A	Noted. The SEA has considered future housing developments within the cumulative effects assessment, considering Local Plans. The SEA can only assess what is available at the time of writing.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	reliance on community transport in the more rural areas which have no access to rail networks and/or public transport have not been considered.	SEA Report	No	N/A	The SEA has considered impacts upon rural areas within the assessment of SIP options. The SEA Framework considers the specific challenges to rural communities, and this has been considered within the assessment of SIP options, including whether they improve access to rural communities through community/public transport modes.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Have the proposals also been assessed through a strategic land use framework? It seems that some of the trade-offs, particularly if not mitigated coherently, risk undermining either environmental outcomes, or exacerbating climate change adaptation and mitigation activities, which would then seem to a factor which may increase the costs associated with the proposals.	SEA Report	No	N/A	The SIP has been assessed using the Assessment Framework described in the SEA Environmental Report which follows SEA legislation and guidance. Potential interactions are considered in the SEA where key relationships between different environmental assets / resources and interventions are discussed as appropriate at this strategic level. Additionally, Section 7 Cumulative Effects reports considers where several individual policies and sites have a combined effect on an objective; and where several policies and sites each have insignificant effects but together have a significant effect. Key interactions and potential trade-offs will need to be considered at project level based on project level information. We note that the UK Government aims to develop a Land Use Framework which, once in place, will also guide the undertaking of environmental assessments.

Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Add reference into the SEA on industry and sector best practice to safeguard one's experience of our sensitive and valued historic places and landscapes, for stakeholders to consider when schemes are further developed.	SEA Report	Yes	WSP	Reference to schemes needing to follow industry and sector best practice as they are further developed to be made in Section 8.1 Mitigation and Enhancement measures. It is already implicit in the text but agreed that best to state this clearly.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Add education of people in general on the consequences of their transport choices, both for carbon emissions, the future climate patterns and their health	SEA Report SIP	No	N/A	Noted. The SIP does not include specific policies/options relating the education of people with regard to their transport choices. The SIP proposes physical interventions across the Western Gateway STB Region and is therefore unlikely to educate people upon their transport choices. Therefore, this has not been included within the SEA Assessment.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	important to understand that at the strategic planning stage a precautionary approach is required as any actual impacts will be mostly unknown until the schemes reach option selection and design, at which time it will likely not only be possible but likely a requirement to ensure mitigations are included to minimise or eradicate the impacts where possible.	SEA Report	No	WSP	Noted. The SEA Report and Assessment have taken a precautionary approach to the assessment of the SIP and Options. This has been detailed within Section 3.6 of the SEA Report.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Health: Active travel routes facilitating access to green spaces, the sea and other places of relaxation for well-being and mental health should be specifically mentioned.	HIA SEA Report	Yes	WSP	The HIA has included an assessment of active travel options specifically. These options have also been assessed within the SEA, with specific mention to health and active travel in these assessments. To further clarify, the HIA has been amended to include a list of SIP options assessed within each section of the HIA assessment.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	We believe that there is scope and opportunity within the consultation to address the serious and ongoing issue of taxi and Private Hire Vehicle access refusals encountered all too often by guide dog and other assistance dog owners.	SIP EqIA	No	N/A	Noted. There are no SIP Options relating to the use of taxi and Private Hire Vehicles. Therefore, this issue cannot be included within the EqIA assessment of SIP Options.

Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	A Guide Dogs survey found that many taxi drivers are unaware of their legal obligations and the impact refusals have on assistance dog owners. E-scooters pose a particular risk to vulnerable people and notably to those who are blind or partially sighted. Guide Dogs would urge decision makers within the Western Gateway sub-national transport body and constituent local authorities to engage with this significant new research by UCL and seriously consider the recommendations from Guide Dogs contained within it in relation to current and future regeneration and infrastructure schemes across the Western Gateway region.	SIP EqIA	No	N/A	The SIP does not include any options specifically related to the use of taxis or Private Hire Vehicles, not does it include reference to E-Scooters. Therefore this has not been considered within the EqIA assessment.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Infrastructure that reflects the reality of the lives of the young and old. These groups need access to active travel i.e. walking, through clear signposted safe walking routes.	EqIA	No	N/A	The SEA has included an assessment of the SIP options, including active travel options, with relation to age within the EqIA.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Effects of new major roads on drainage/existing flood plains.	SEA Report	No	N/A	The SEA has considered the water environment and flooding within the assessment of options within SEA13. SIP Options have been assessed using GIS data to establish their proximity to flood zones, and this has been detailed within the assessment of significant effects (Appendix E). New major infrastructure interventions will be subject to project level assessments which will inform project specific mitigation.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	SEA does not make reference to Glos District Council Local Plan	SEA Report	Yes	WSP	The SEA has been updated to include reference to the local plans within Gloucestershire within the assessment of cumulative effects section.
Public Response	Do you think there are any impacts we have overlooked, or have any other comments on the sustainability appraisal?	Junction 14 M5 was not reviewed by the SEA	SEA Report	No	N/A	Not in current list of proposals in the SIP, hence it has not been assessed in the SEA.

Public Response	Do you think the identified impacts are acceptable?	It looks like there's significant impact on the environment. It also makes no mention of current building plans and assumes a static population.	SEA Report	No	N/A	The SEA has considered future population growth within the assessment of SIP Options, specifically through SEA1. The Scoping Report (Appendix B to the SEA Report) also details the future baseline of the Western Gateway STB Region, including future population growth. The SEA Assessment has considered current development plans within the cumulative effects assessment. The SEA can only assess what is available at the time of writing.
Public Response	Do you think the identified impacts are acceptable?	Supported proposals that can be mitigated. Unmitigated impacts would need to be assessed case by case. Particularly concerned that some schemes projected to be at risk of flooding and to increase car use in some circumstances. Biodiversity and heritage impacts may be of concern, but dependent on level impact and value of assets.	SEA Report	Yes	Western Gateway STB Partners	The SEA has proposed high level mitigation measures within the assessment of SIP Options, and summarised these within Section 8 of the SEA Report. Individual project level assessments will be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes and propose mitigation measures to minimise these effects.
Public Response	Do you think the identified impacts are acceptable?	It does not appear to consider how people living in villages or towns that do not have direct access to transport are supposed to use facilities and services outside of their immediate location.	SEA Report HIA	No	N/A	The SEA has considered rural communities within assessment of SIP Options. This includes the impact of proposed options upon access to services and facilities. Additionally, this has also been considered within the HIA, with specific reference to access to services.
Public Response	Do you think the identified impacts are acceptable?	Not sufficient attention to inequality.	EqIA	No	N/A	An EqIA has been completed to support the assessment of the SIP. This has considered the inequalities that may arise as a result of SIP Options.
Public Response	Do you think the identified impacts are acceptable?	Not sufficient attention to the needs of active travel for the young and older adults.	EqIA	No	N/A	The EqIA has included an assessment of the SIP options, including active travel options, with relation to age within the EqIA.

Public Response	Do you think the identified impacts are acceptable?	Safe walking routes and access to public transport needed. - Wheels of every sort seem to be the priority. Everyone needs safe walking routes. Without safe walking routes to access public transport the car / taxi is the only option. Both expensive for the poor/ disadvantaged leading to isolation, poor health and further disadvantage.	SEA Report SIP	No	N/A	The SEA has assessed SIP Options and the consideration of safety as a result of these options within SEA1. These supporting appraisal questions have been detailed in Table 4-2.
Public Response	Do you think the identified impacts are acceptable?	You describe the negative impacts as 'potential' issues. However, there is nothing 'potential' about them - they ARE issues that will need mitigation, which needs to have the involvement of not just the project stakeholders but the public within these areas.	SEA Report	No	Western Gateway STB Partners	Western Gateway STB will consider the mitigation proposals set out within the SEA Report within any projects arising from the SIP. Individual project level assessments will be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes, and propose mitigation measures to minimise these effects.
Public Response	Do you think the identified impacts are acceptable?	Equalities impact for disabled people and their carers are not acceptable. It is not enough to simply improve access, as outlined in our previous response.	EqIA	No	WSP	The HIA and EqIA assessments have considered carers within their assessments of SIP Options where appropriate.
Public Response	Do you think the identified impacts are acceptable?	I work on a biodiversity project so having substantial negative impacts on biodiversity in the name of climate seems crazy	SEA Report	Yes	Western Gateway STB Partners	Western Gateway STB will consider the findings of the SEA, specifically in relation to biodiversity, within potential schemes arising from the SIP. Individual project level assessments will be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes, and propose mitigation measures to minimise these effects.
Public Response	Do you think the identified impacts are acceptable?	The west of the county, whilst contributing to the cost of these initiatives, will see little or no benefit especially if you have no means of transport other than public transport. This discriminates on the elderly.	SEA Report EqIA HIA SIP	Yes	Western Gateway STB	The SEA, HIA and EqIA have considered the impact of the SIP Options on the elderly located within the Western Gateway STB Region. Western Gateway will consider this response within its development of the final SIP Options.

Public Response	Do you think the identified impacts are acceptable?	We cannot keep building in flood zones.	SEA Report	No	Western Gateway STB Partners	The SEA has identified options that are located within flood zones and have identified schemes located in flood zone 3 as having potential significant negative effects. The SEA recommends mitigation measures to reduce the effects of flooding for options located in flood zones 2 or 3. Flood risk will continue to be considered as the interventions develop.
Public Response	Do you think the identified impacts are acceptable?	I am concerned about the 'significant' environmental and biodiversity impacts and any proposals which increase vehicle use.	SEA Report	No	N/A	The SEA has identified significant negative effects for biodiversity as a result of applying a precautionary approach to the assessment. The SEA has proposed mitigation measures for biodiversity. Individual project level assessments will be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes, and propose mitigation measures to minimise these effects.
Public Response	Do you think the identified impacts are acceptable?	The Equality benefits don't take into account those who do not own their own car and are reliant on public transport - much more significant than distinguishing than just ethnic minority groups. In addition, for those who do drive, a reduction in car use with a shift to greater use of public transport makes the system becomes more efficient.	EqIA	Yes	WSP	The EqIA has been updated to include specific references to the impacts of the SIP on those who do not have access to a private vehicle and include additional mention to this group where appropriate.
Public Response	Do you think the identified impacts are acceptable?	You cannot reduce vehicle (petrol/diesel) usage in areas where there are no alternatives available and the cost of purchasing electric vehicles in beyond most people's financial capacity. Improvements in transport have not been considered in some areas where significant houses are being built - particularly in the remoter areas of counties.	SEA Report EqIA	No	N/A	The SEA has assessed the SIP Options, which do not include measures specifically relating to electric vehicle use. The SEA has assessed the likely effects of the Options with relation to the local population in SEA1, as well as the equalities of the SIP Options within the EqIA. The SEA has also considered the cumulative effects of the plan, which includes potential housing developments.

Public Response	Do you think the identified impacts are acceptable?	Include horse riders as vulnerable road users	SEA Report	Yes	WSP	The SEA has been updated to include horse riders as vulnerable road users in Table 4-1.
Public Response	Do you think the identified impacts are acceptable?	Consideration must be given to the movement of wild animals, i.e. deer, badgers, hedgehogs etc which must have travel lanes over and under these new improved road and railways.	SIP SEA Report	Yes	Western Gateway STB Partners WSP	The SEA has been updated to include an additional mitigation measure within the SEA Report to address the movement of animals. Western Gateway STB Partners will consider this comment within the design of schemes that arise as a result of the SIP.
Historic England	N/A	Thank you for providing an opportunity to consider and respond to the proposed Investment Plan and its 35 individual schemes. Historic England welcome an encouragement of sustainable forms of transport and endorse appropriately designed improvements to, for example, public places, including streets, stations, bus stops and improved cycling facilities, which make alternatives to the car appealing and accessible.	SEA Report	No	N/A	General comment, no action required.
Historic England	N/A	We note on page 36 that your Sustainability Appraisal considers that the majority of options are identified as likely to have significant negative effects on designated heritage assets and/or landscapes …but the impacts can only be quantified when the proposals are developed in more detail. Although this appears rather alarming, we do however recognise that many of the 35 proposals relate to improvements to bus, coach and rail services, to existing stations and rail infrastructure where, if carefully considered, the impact on the historic environment is likely to be limited.	SEA Report	No	N/A	Noted. No action required.
Historic England	N/A	There are indeed several proposals where, if well designed, can have a positive heritage impact such as in relation to the Bournemouth and Weymouth town centre public realm projects and Bristol and Bath walking and cycle initiatives.	SEA Report	No	N/A	Noted. No action required.
Historic England	N/A	Nevertheless, to address the risk and avoid a potential significant negative affect as indicated by the Sustainability Appraisal, it will be important for the design of these schemes to be well considered and implemented, deploying industry and sector best practice to safeguard one's experience of our sensitive and valued historic places and landscapes. We look forward to appreciating proposals that do so in due course.	SEA Report	No	N/A	Noted. No action required.
Historic England	N/A	National Highways The Road to Good Design is one good example that shows the art of the possible and how new infrastructure including re-engineered roads and junctions; interchanges and the like can be successfully delivered to	SEA Report	No	N/A	Noted. No action required. The SEA includes reference to the Road to Good Design within Appendix B to the SEA Report.

		efficiently and beautifully fit within, and positively respond to their historic and natural contexts.				
Guide Dogs	N/A	Guide Dogs is pleased that the Western Gateway sub-national transport body has identified that “Safety in the public realm and on public transport, particularly for vulnerable users, should be designed into proposals” and that the body “will work with partners as part of our Regional Centre of Excellence approach to facilitate the delivery of active and public transport infrastructure and services that cross local boundaries” and we would be happy to support this. However, within the Western Gateway Strategic Investment Plan EqIA, whilst we would likely agree that “People with a disability will benefit from the active travel improvements, which is important given that walking is one of the two main modes of transport for disabled adults in England” , this will only be the case for people who are blind or partially sighted if infrastructure changes to the pedestrian environment are inclusive, accessible and safe. Guide Dogs would urge decision makers within the Western Gateway sub-national transport body and constituent local authorities to engage with this significant new research by UCL and seriously consider the recommendations from Guide Dogs contained within it in relation to current and future regeneration and infrastructure schemes across the Western Gateway region. I have included the report summary, “Designing for Inclusion; The accessibility challenges of some active travel infrastructure for people with vision impairment and other disabled people” with this response, and the full research is available to download through the following link: Technical Report 2024 (gd-prod.azureedge.net)	EqIA SIP SEA Report	Yes	WSP Western Gateway STB	The SEA has included an additional mitigation measure relating the ensuring the pedestrian environment is inclusive, accessible and safe for disabled users including visually impaired users, where appropriate. Western Gateway STB will consider this comment within the development of the SIP and developments that may arise from the SIP.
Public Response	N/A	Equalities impacts haven't addressed people on low incomes or elderly access to services	EqIA	No	N/A	The SEA has considered the impacts upon people on low incomes within the SEA Assessment (SEA1: Population). The EqIA has also considered effects upon the elderly within the assessment of the protected characteristic: age.
Public Response	N/A	Full equalities impact assessments need to carried out for each scheme and diversity impact assessments for railway schemes	EqIA	Yes	Western Gateway STB Partners	Promoters of the Individual projects arising from the SIP will need to consider The Public Sector Equality Duty (Section 149 of the Equality Act 2010).
Public Response	N/A	Good as far as they go. Should you add "Quality of life" impacts? - Journey times and costs, and how long people have to wait for public transport for example?	SEA Report	No	N/A	The SEA and HIA have considered quality of life throughout the assessment of SIP Options, within both assessments. These include assessments of public transport services and any

						improvements to service availability is considered.
Public Response	N/A	It is good to consider potential disadvantages and to mitigate for them, especially in terms of safety and security for younger people who can be intimidated by unlit areas. If small shops are situated near rail stations this can provide the necessary assurance to young people (not just women but young white men who are also significant victims of assault). Step-free access is helpful not just to the disabled but to young parents and their toddlers. However, none of this should be a reason not to implement public transport interventions, whether bus or rail. Cycling on the new e-bikes is now a convenient and safe experience, even if taking an e-scooter can feel a bit precarious!	SEA Report EqIA	No	N/A	The SEA has considered safety and security, including feelings of safety, within their assessment of SIP Options. This is included within SEA1: Population. Additionally, this has been considered within the EqIA assessment within the Age protecter characteristic assessment.
Public Response	N/A	Lack of meaningful data. Loss of agricultural land, issues with flood areas, significant negative effects on biodiversity, pollution and increased noise from more traffic and additional transportation of goods - all these factors (unquantifiable at the moment) sound massively negative.	SEA Report	No	N/A	The SEA has taken a precautionary approach to the assessment of SIP options, proportionate to the high level nature of the SIP. Individual project level assessments will be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes, and propose mitigation measures to minimise these effects.
Public Response	N/A	There also seems to be some confusion in the Environmental Report about the role of SuDs, which should be considered for all 'major development involving surface water drainage' to reduce the risk of flooding elsewhere, not just to reduce the risk of flooding on projects in areas at risk of flooding (Flood risk assessment: flood zones 1, 2, 3 and 3b - GOV.UK. The flood zones 1-3 relate to risk of flooding from rivers and the sea so additional checks are required to identify areas at risk of flooding from surface water, groundwater and reservoir flooding. Associated risks of landslip and slope failure and contamination are mentioned briefly but not explored in sufficient detail to assess the scale of impacts.	SEA Report	No	N/A	The SEA has identified options located within flood zones and proposed the use of SuDS in order to mitigate any potential significant effect arising from options. This is in line with the strategic level of the SIP. However, all projects arising from the SIP will be subject to individual assessment, including flood risk assessment, and will consider the implementation of SuDS on an individual project basis.
Public Response	N/A	Impacts need to be accurately described and mitigations properly investigated before they can be considered acceptable.	SEA Report	No	N/A	The SEA has assessed impacts in line with the strategic nature of the SIP and described effects using the best available data. Mitigation measures have been proposed within the SEA. Individual project level assessments will

						be undertaken for interventions arising as a result of the SIP which by nature, size and/or location may result in potential adverse significant effects. These assessments will identify any potential significant effects resulting from individual schemes, and propose mitigation measures to minimise these effects.

Appendix D

Key to Assessments

Appendix E

Assessment of Options

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