



Western Gateway
Sub-national Transport Body



Western Gateway Strategic Transport Body

Strategic Investment Plan

Strategic Environmental Assessment Non-
Technical Summary

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WSP

Kings Orchard
1 Queen Street
Bristol
BS2 0HQ

Phone: +44 117 930 6200

WSP.com

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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 Sub-national Transport Body (STB) published their Strategic Transport Plan in March 2024, and are now developing the associated Strategic Investment Plan (SIP). The SIP 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 local 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; and
 - West of England Mayoral Combined Authority (WEMCA).

1.2 Strategic Investment Plan

- 1.2.1. Western Gateway STB published their Strategic Transport Plan (STP) in March 2024. The vision and objectives for the SIP remain the same as those of the STP. 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.”

- 1.2.2. To achieve this vision, the SIP seeks to identify proposals that can deliver the 12 objectives outlined below. These 12 objectives are drawn from the STP and relate to the delivery of the STP’s five key themes.

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.
- 1.2.3. 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.
- 1.2.4. The SIP fulfils three important functions:
- Identifies regional transport proposals that are best able to deliver the aims of the STP.
 - 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.
 - Maintains an inventory of regional-level schemes proposed by our partner authorities.
- 1.2.5. 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.
- 1.2.6. A total of 101 proposals were submitted to the STB by the nine Local Authorities in the region, National Highways and Network Rail. These initial 101 proposals were subject of an initial sifting process which resulted in a long-list of 62 options.
- 1.2.7. The long-list of options was subject to an assessment process against the 12 objectives listed above and in **Section 2** of the main **SEA Report** 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.

2 SEA Process

2.1 What is SEA?

2.1.1. SEA is a systematic process that is undertaken during the preparation of a plan. Its role is to promote sustainable development by assessing environmental, social, and economic impacts, as well as proposing mitigation to address adverse effects as a result of the implementation of the plan or programme.

2.2 SEA Stages

2.2.1. The Key stages of the SEA process are the following:

- **Stage A:** Production of a scoping report which sets the context of the SIP, identifies other relevant legislation, plans and programmes, baseline information as well as key issues and opportunities for the SIP and an assessment framework;
- **Stage B:** Assessment of the draft SIP and alternatives, against the SEA objectives identified within the Scoping Report;
- **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; and
- **Stage E:** Monitoring the significant effects of implementing the plan or programme on the environment.

2.2.2. This NTS and the main Environmental Report comprise the updating of the Environmental Report following consultation on the draft SEA and SIP carried out between December 2024 and January 2025..

SEA Framework

2.2.3. The SEA Scoping Report set out the key baseline information and the relationship of the SIP with other relevant plans and programmes. From this information, key sustainability issues were identified and these informed the development of the SEA framework of objectives.

2.2.4. The objectives guiding the assessment of the SIP and alternatives are set out below:

- **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;
- **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;
- **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;
- **SEA8:** To protect and enhance townscapes and landscapes, including the rural environment, town and city centres, and seascapes;
- **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”;
- **SEA11:** To conserve, protect and enhance the water environment, water quality and water resources;
- **SEA12:** To protect and enhance air quality by reducing emissions from the transport network;
- **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;
- **SEA15:** To reduce the amount of waste produced and promote sustainable use of resources (including land); and
- **SEA16:** To ensure that infrastructure is upgraded, well-maintained and resilient to future climate risks and support future population growth.

2.3 Assumptions and Limitations

- 2.3.1. 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.
- 2.3.2. 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.

- 2.3.3. 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.
- 2.3.4. The assessment of the draft SIP and alternatives has been undertaken as a desk-based exercise using the baseline information from the Scoping Report.
- 2.3.5. 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.

3 Assessment Findings

3.1 Assessment of Preferred Options

- 3.1.1. The transport schemes proposed through the SIP (38 options) were assessed against each of the SEA objectives. A summary of the significant effects are detailed in **Table 3-1** below.
- 3.1.2. Further details on the assessment of the SIP options can be found within **Section 5** of the main **SEA Report** and **Appendix E** to the main **SEA Report**.

Table 3-1 - Summary of Significant Effects – Measures and Actions Assessment

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA1 (Population and Equalities)	15	0	0	<p>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.</p> <p>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 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.</p>
SEA2 (Human Health)	10	0	2	<p>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.</p> <p>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.</p> <p>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.</p>
SEA3 (Community Safety)	5	0	4	<p>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.</p> <p>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.</p> <p>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.</p>
SEA4 (Economy)	8	0	7	<p>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.</p> <p>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.</p>
SEA5 (Rural Economies)	4	0	0	<p>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</p>

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
				<p>communities and provide improved access to employment, visitor attractions, and encourage tourism within rural communities.</p> <p>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.</p>
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	<p>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.</p> <p>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.</p>
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	<p>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.</p> <p>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.</p>
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	<p>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.</p> <p>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.</p>
SEA15 (Material Assets)	0	15	0	<p>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.</p> <p>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.</p>
SEA16 (Infrastructure)	12	0	15	<p>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).</p> <p>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.</p>

3.2 Assessment of Alternative Options

- 3.2.1. The SEA Regulations require that an assessment of reasonable alternatives is undertaken. For the SIP, the assessment of alternatives will assess the 24 alternative options proposed. These options have been assessed in the same level of detail as the proposed options and effects summarised in **Table 3-2**. Further details on the assessment of the alternative options can be found within **Section 6** of the main **SEA Report** and **Appendix E** to the main **SEA Report**.

Table 3-2 - Summary of Significant Effects – Alternatives Assessment

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA1 (Population and Equalities)	6	0	0	<p>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.</p> <p>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.</p>
SEA2 (Human Health)	1	0	4	<p>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.</p> <p>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.</p> <p>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.</p>
SEA3 (Community Safety)	8	0	9	<p>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.</p> <p>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.</p> <p>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.</p>
SEA4 (Economy)	13	0	7	<p>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.</p> <p>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.</p>
SEA5 (Rural Economies)	4	0	0	<p>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.</p> <p>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.</p>

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA6 (Housing Growth)	4	0	0	<p>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.</p> <p>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.</p>
SEA7 (Biodiversity)	0	10	11	<p>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).</p> <p>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.</p>
SEA8 (Landscape and Townscape)	0	4	20	<p>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.</p> <p>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.</p>
SEA9 (Historic Environment)	0	22	2	<p>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).</p> <p>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.</p>
SEA10 (Access to Heritage Assets)	0	0	21	<p>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.</p>
SEA11 (Water Environment)	0	0	16	<p>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.</p>

SEA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SEA12 (Air Quality)	2	0	3	<p>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.</p> <p>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.</p> <p>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.</p>
SEA13 (Climate Change)	0	19	5	<p>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.</p> <p>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.</p>
SEA14 (Greenhouse Gases)	3	0	12	<p>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.</p> <p>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.</p>
SEA15 (Material Assets)	0	15	0	<p>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.</p>
SEA16 (Infrastructure)	10	0	9	<p>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.</p> <p>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.</p>

4 Cumulative Effects

4.1 Introduction

- 4.1.1. Alongside the assessment of individual transport schemes proposed through the SIP, there is a requirement to consider the effects arising from interactions between the SIP schemes as well as through interactions with other plans, programmes and projects. These are referred to as cumulative effects.

4.2 Cumulative effects as a result of SIP proposals

- 4.2.1. The assessment found that the proposals in the SIP are likely to interact and have positive effects for SEA objectives relating to population and equalities, human health, community safety, economy, rural economies, housing growth, access to heritage assets, air quality, and infrastructure.
- 4.2.2. Cumulative negative effects have been identified for material assets as there is the potential that multiple developments could result in a cumulative loss of best and most versatile land as a result of land take for options. Uncertain effects were identified for biodiversity, landscape and townscape, historic environment, water environment, climate change, and greenhouse gases.
- 4.2.3. Further details on the assessment of the effects can be found within **Section 7.2** of the main **SEA Report**.

4.3 Cumulative effects as a result of interactions with other plans, programmes and projects

- 4.3.1. An assessment of the potential cumulative effects as a result of the SIP proposals interacting with other plans, policies and projects was carried out.
- 4.3.2. The following plans, programmes and projects were taken into consideration:
- Western Gateway STB Local Authorities Local Plans and Local Transport Plans;
 - Neighbouring STB Strategies;
 - Bristol Airport Expansion;
 - Bournemouth Airport Expansion;
 - Nationally Significant Infrastructure Projects (NSIPs); and
 - East West Rail.
- 4.3.3. Potential positive effects were identified for population and equalities, human health, community safety, economy, rural economies, housing growth, access to heritage assets, air quality, and infrastructure.
- 4.3.4. No potential significant negative effects were identified as a result of inter-project cumulative effects.

- 4.3.5. Potential uncertain positive and negative effects were identified for biodiversity, landscape and townscape, historic environment, water environment, air quality, climate change, greenhouse gases, and material assets.
- 4.3.6. Further details on the assessment of the inter-project cumulative effects can be found within **Section 7.3** of the main SEA Report.

5 Mitigation, Enhancement and Monitoring

5.1 Mitigation and Enhancement Measures

- 5.1.1. Mitigation of significant negative effects of the plan and enhancement of positive effects are a key purpose of SEA. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan.
- 5.1.2. Proposed mitigation and enhancement measures have been set out in **Table 5-1** below.
- 5.1.3. 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 guidance and industry practice, and relevant legislative requirements will be considered from the outset. 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 5-1 - Proposed Mitigation and Enhancement Measures

SEA Objective	Mitigation/Enhancement	Mechanism
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
SEA7: Biodiversity SEA8: Landscape and Townscape	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.	Project level design and assessment

SEA9: Historic Environment SEA15: Material Assets	<p>Development should avoid removing any habitats associated with green verges and should consider incorporating small scale green infrastructure.</p> <p>Where practicable, land take from green belt or high value land should be minimised.</p> <p>Consideration should be given to the movement of wild animals during scheme design, with design facilitating wildlife corridors where practicable.</p>	
SEA7: Biodiversity SEA15: Material Assets	<p>Interventions should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process.</p>	Project level design and assessment
SEA7: Biodiversity SEA8: Landscape and Townscape	<p>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.</p>	Project level design and assessment
SEA7: Biodiversity SEA8: Landscape and Townscape SEA2: Human Health	<p>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.</p> <p>Infrastructure schemes should incorporate design measures to lessen the impact on biodiversity and ensure biodiversity net gain.</p> <p>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.</p>	Project levels biodiversity net gain assessment
SEA8: Landscape and Townscape SEA9: Historic Environment	<p>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.</p> <p>Development proposals should not harm, and should seek to make a positive contribution to, the characteristics national landscapes and national parks.</p>	<p>Historic Landscape Characterisation</p> <p>Project level landscape and visual impacts assessments as part of subsequent EIA/consenting process</p> <p>Heritage Impact Assessments</p>
SEA9: Historic Environment	<p>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.</p> <p>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.</p>	<p>Project level landscape and visual impacts assessments as part of subsequent EIA/consenting process</p> <p>Heritage Impact Assessments</p>
SEA9: Historic Environment	<p>Development proposals with the potential to affect World Heritage Sites or their settings should be supported by Heritage Impact Assessments.</p>	<p>Project level landscape and visual impacts assessments as part of subsequent EIA/consenting process</p> <p>Heritage Impact Assessments</p>
SEA8: Landscape and Townscape SEA9: Historic Environment	<p>Sensitive design should be considered for any new developments within town centres to ensure positive effects on local heritage assets and landscapes.</p>	<p>Historic Landscape Characterisation</p> <p>Project level landscape and visual impacts assessments as part of subsequent EIA/consenting process</p>

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

5.2 Monitoring Measures

- 5.2.1. 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.
- 5.2.2. 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.
- 5.2.3. 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.

6 Next Steps

- 6.1.1. In accordance with the SEA Regulations, the SEA Report was made available alongside the draft SIP and informed its development.
- 6.1.2. 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.
- 6.1.3. An indicative timetable of the remaining stages of the SEA and SIP have been included in **Table 6-1** below.

Table 6-1 – Indicative Local Plan and SA Timetable

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



Kings Orchard
1 Queen Street
Bristol
BS2 0HQ

wsp.com

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