



Transport for the South East

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# TRANSPORT FOR THE SOUTH EAST AREA STUDIES

Appraisal Specification Report



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Appraisal Specification Report

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Transport for the South East

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## Appraisal Specification Report

WSP

WSP House  
70 Chancery Lane  
London  
WC2A 1AF

Phone: +44 20 7314 5000

Fax: +44 20 7314 5111

WSP.com

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## INTRODUCTION

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# 1 INTRODUCTION

## 1.1 STUDY OVERVIEW

- 1.1.1. Transport for the South East (TfSE), in their role as the Sub National Transport Body for South East England, are delivering a programme of five Area Studies that will prioritise interventions that help deliver TfSE's vision for the South East. This is a key step towards developing a Strategic Investment Plan to secure funding for the South East's transport network.

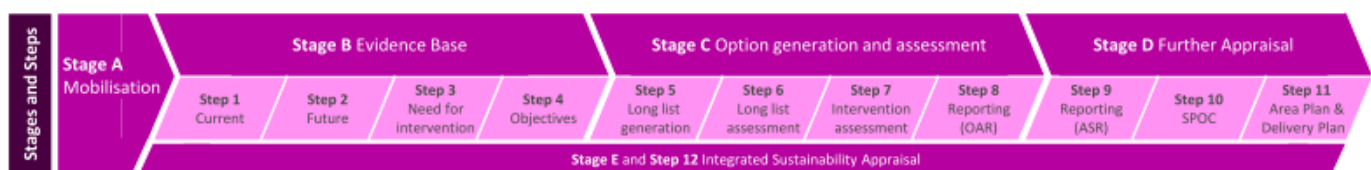
## 1.2 PURPOSE OF APPRAISAL SPECIFICATION REPORT

- 1.2.1. This Appraisal Specification Report (ASR) builds upon the identification of the short-listed interventions and packages of interventions, as documented in the Options Assessment Reports (OARs). The ASR sets out the proposed approach for the more detailed assessment of these short-listed interventions and packages of interventions to demonstrate their combined impact, comparative performance and inform decision-making regarding their progression.
- 1.2.2. The methodology and assumptions presented in this ASR will underpin the modelling and appraisal work for the Strategic Programme Outline Cases (SPOCs). The SPOCs, aligned to HM Treasury's Strategic Outline Programme<sup>1</sup>, will describe a preferred way forward for interventions and packages of interventions that show the greatest promise for further development. The SPOCs will support the seeking of funding commitments sufficient to progress development of recommended interventions and to further refine the overall programme.
- 1.2.3. Funding approval for specific interventions and packages of interventions will be sought subsequently through the government's staged approach for major investment decisions<sup>2</sup>.

## 1.3 CURRENT STAGE OF STUDY

- 1.3.1. This ASR forms part of Stage D of the study development, addressing Step 9 of the study methodology, which is broadly aligned with the Department for Transport's (DfT) Transport Analysis Guidance (TAG).

**Figure 1-1 - Area Study Stages and Steps**



<sup>1</sup> HM Treasury (2018) Guide to Developing the Programme Business Case

<sup>2</sup> Strategic Outline Case (SOC), Outline Business Case (OBC) and Full Business Case (FBC) – HM Treasury (November 2016) Treasury approvals process for programmes and projects



## 1.4 STRUCTURE OF ASR

1.4.1. This ASR is structured as follows:

<b>Chapter 1 – Introduction</b>	Providing the context for the ASR, its purpose and content
<b>Chapter 2 – Study Context</b>	Setting out the background of the TfSE Area Studies
<b>Chapter 3 – Analytical Approach</b>	Presenting an overview of the approach for the modelling and appraisal work
<b>Chapter 4 – Economic Appraisal</b>	Describing the assessment approach for the sub-impacts addressed under the Economic objective
<b>Chapter 5 – Environmental Appraisal</b>	Describing the assessment approach for the sub-impacts addressed under the Environmental objective
<b>Chapter 6 – Social &amp; Distributional Impacts Appraisal</b>	Describing the assessment approach for the sub-impacts addressed under the Social objective and the Distributional impacts
<b>Chapter 7 – Appraisal Reporting</b>	Identifying the reporting that will be produced to document the appraisal findings

## 2 STUDY CONTEXT

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### 2.1 BACKGROUND

- 2.1.1. Following the publication of TfSE's Transport Strategy, the Area Studies are being undertaken to provide greater detail on the issues, challenges and opportunities identified within the strategy and to set out a shortlist of interventions to make life better for people, for businesses and, for the environment of the South East.

### 2.2 THE STUDY AREAS

- 2.2.1. Five Areas Studies, encompassing the TfSE region, are being undertaken. These are:
- **Outer Orbital Area Study** – encompassing the strategic corridors that follow the coastline from the New Forest, in Hampshire, towards East Kent.
  - **Inner Orbital Area Study** – encompassing the strategic cross-regional routes around the southern outskirts of London.
  - **South Central Radial Area Study** – encompassing the corridors that share the London-Gatwick corridor in the north and fan out in the south to connect much of the Sussex coastline to the capital.
  - **South East Radial Area Study** – encompassing the transport corridors connecting the Channel Tunnel and Port of Dover to London, as well as serving Kent, Medway and East Sussex.
  - **South West Radial Area Study** – encompassing the strategic highways between London and the South West, as well as parts of the Great Western Railway and South Western Mainline. It also includes the strategically important cross-Solent links with the Isle of Wight.
- 2.2.2. An OAR has been produced for each of the Area Studies.

### 2.3 VISION & OBJECTIVES OF THE STUDIES

- 2.3.1. TfSE's Transport Strategy sets out a bold vision for 2050.
- By 2050, the South East of England will be a leading global region for net-zero carbon, sustainable economic growth where integrated transport, digital and energy networks have delivered a step change in connectivity and environmental quality.***
- A high-quality, reliable, safe and accessible transport network will offer seamless door-to-door journeys enabling our businesses to compete and trade more effectively in the global marketplace and giving our residents and visitors the highest quality of life.***
- 2.3.2. Aligned with this regional vision, specific Area Study vision statements have been produced, along with objectives developed under a range of themes, as set out below.

**Table 2-1 – Area Study Themes of Objectives**

Outer Orbital	Inner Orbital	South Central Radial	South West Radial	South East Radial
Economy	Economy	Economy	Economy	Economy
Society	Society	Society	Society	Society
Natural and Historic Environment	Natural and Historic Environment	Natural and Historic Environment	Natural and Historic Environment	Natural and Historic Environment
Climate change	Climate change	Climate change	Climate change	Climate change
Safety	Safety	Reliability and Resilience	Freight	Regeneration
Health and Wellbeing	Health and Wellbeing	Sustainable Integrated Planning	Cross boundary interaction	International Gateways

- 2.3.3. The OAR for each Study Area presents their respective vision statement and objectives, which were applied as part of the Option generation and assessment (Stage C). The respective vision statement and objectives reflect the Evidence Base (Stage B) developed for each Area Study, which set out current and future challenges and opportunities.

## 2.4 PREFERRED PACKAGES AND INTERVENTIONS

- 2.4.1. Preferred packages and interventions were identified through an extensive process of option generation and assessment (Stage C). It comprised:

- Long List Generation
- Typology Assignment
- Long List Assessment
  - Strategic Assessment
  - Economic Assessment
  - Deliverability Assessment
- Package Development
- Package Modelling

- 2.4.2. The process is detailed in the OARs and the resulting preferred packages and interventions are set out in Appendix A.

## 2.5 PLACE BASED STRATEGIES

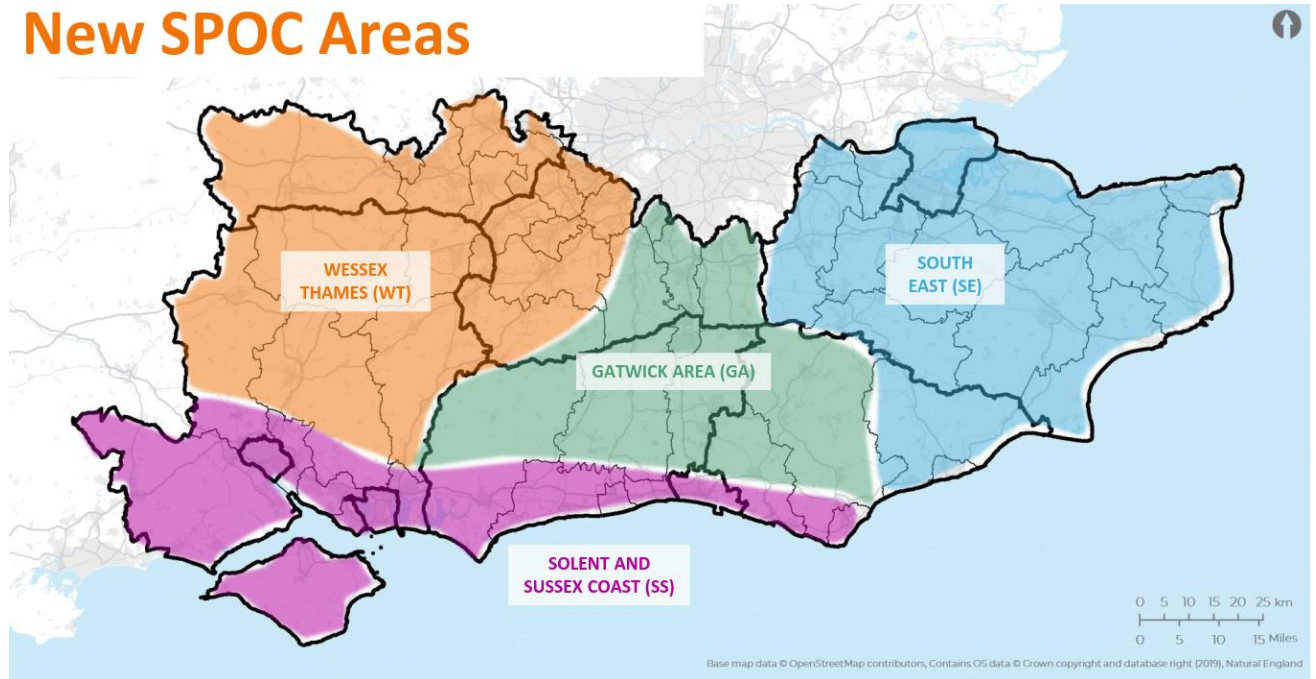
- 2.5.1. The preferred packages and interventions will be the subject of further assessment. This will be reported in the SPOCs, for which this ASR sets out the proposed methodology and assumptions for modelling and appraisal. Four SPOCs will be produced, each capturing distinct geographies in which a coherent set of interventions and packages of interventions are located. These are:

- Wessex Thames (WT)

- Gatwick Area (GA)
- South East (SE)
- Solent and Sussex Coast (SS)

2.5.2. Figure 2-1 illustrates the geographies for each of the SPOCs.

**Figure 2-1 - SPOC Areas**



## 3 ANALYTICAL APPROACH

### 3.1 INTRODUCTION

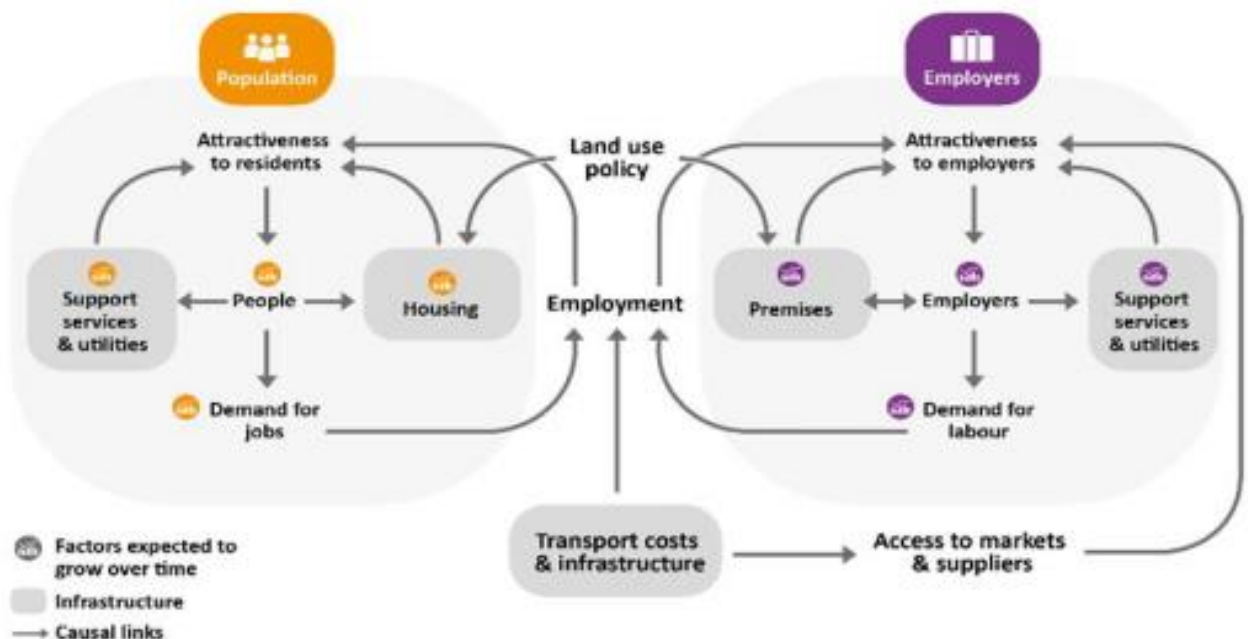
- 3.1.1. The analytical approach has been developed to ensure consistency in approach between the SPOCs to enable each of them to inform the SIP on a comparable basis. The approach builds on the work undertaken for the Area Studies and applies the analytical tools developed. The analytical metrics allow comparative assessments to be made between sets of packages and packages of interventions to inform decisions regarding those which are to be progressed further. However, given the early stage of development of the intervention proposals, quantified analysis of their value for money will not be undertaken. This will be addressed in the project business cases for the interventions proposed in the SIP.

### 3.2 MODELLING TOOLS

#### SEELUM

- 3.2.1. The South East Economy and Land Use Model (SEELUM) is a transport and land use model that simulates the interaction of transport, people, employers and land-use over periods of time. It was commissioned by TfSE in 2018 to test the impact of the scenarios developed in support of the development of the Transport Strategy for the South East.
- 3.2.2. Figure 3.1 provides an overview of SEELUM. Due to the geographical scope and inter-modal nature of the Area Studies, it was agreed that SEELUM would be used to model the impacts on transport and socioeconomic outcomes of the packages developed. It will continue to be used for the SPOCs.

**Figure 3-1 - Overview of SEELUM**



## SEELUM'S CAPABILITIES AND FUNCTIONS

- 3.2.3. SEELUM tests how investment in transport, coupled with changes to land-use policy, affects transport outcomes and the economic performance of the South East. It does this by simulating how changes in patterns of connectivity and access affect how attractive different locations are for employers and/or households to locate in, how they respond to these changes, and what transport patterns arise from these changes.
- 3.2.4. For example, if travel costs rise in a particular area (potentially due to highway congestion), depending on the other options available, people may change their mode of travel, change where they live, or change where they work. In the extreme, if there are no other viable options to access work, people can become unemployed.
- 3.2.5. Similarly, businesses can relocate to an area if transport costs reduce, increasing their accessibility to the workforce. SEELUM also simulates how land use evolves over time. It considers how developers provide new housing, the inward and outward migration of households, and the start-up and closure of businesses.
- 3.2.6. SEELUM includes internal models of highways, bus and rail services, and walking and cycling networks. These all connect places together and influence their relative advantages as places to live or work. Where known, SEELUM can incorporate planned land-use changes and investment in transport infrastructure or services.
- 3.2.7. SEELUM also models the carbon emissions of the highway and railway networks. This is based on the Defra's Emissions Factors Toolkit (provided by DfT). Highway emissions are calculated as a function of the vehicle-kilometres forecast and an emissions rate based on road type (rural, urban, motorway) and fleet mix. Railway emissions are calculated by a function of kilometres travelled, vehicles in service, the consumption rate per vehicle-kilometre, and the greenhouse gas emissions per unit of fuel used.

## MODELLING PACKAGES IN SEELUM

- 3.2.8. To model the impact of the packages of interventions adjustments are made in SEELUM to the:
  - Generalised Journey Times (GJTs) within and between each zone (by mode); and
  - Characteristics of links on the highway and railway network (notably capacity).
- 3.2.9. For example, to model an improvement in bus frequencies between Chichester and Bognor Regis, GJTs would be reduced for bus between each town's respective SEELUM zone. To model an improvement to the Chichester Bypass, the capacity of the highway link in SEELUM that models this part of the highway network would be increased.
- 3.2.10. The packages will be modelled individually and collectively in SEELUM from a base year of 2018 and run for 32 years to 2050, to align with the Department for Transport's National Trip End Model forecast horizons.

## SEELUM OUTPUTS

- 3.2.11. SEELUM produces detailed reports on:
  - changes in land-use in each zone (i.e., the number of housing units and number of employment premises);
  - changes in households, population and the workforce in each zone;

- changes in employment (jobs filled) in each zone and the unemployment rates;
- changes on CO2 emissions from transport activity;
- travel patterns, volumes and mode shares; and
- time savings benefits for appraisal, and the wider economic impacts on productivity and agglomeration.

### 3.3 BUSINESS AS USUAL COMPARATOR

- 3.3.1. To assess the effect of the preferred packages and interventions, the model outputs are presented as a comparison to a Business as Usual Scenario (BaU). The BaU Scenario is based on the National Trip End Model that also projects employment and population growth to 2050 and is 'without' the model adjustments made for the preferred packages and interventions.

### 3.4 APPRAISAL ASSUMPTIONS

- 3.4.1. Where benefits are monetised, they will be treated in a consistent basis assuming:
- 2021 prices
  - 3.5% discount rate to 2021
  - Market prices applying 19% adjustment factor

### 3.5 APPRAISAL SPECIFICATION SUMMARY TABLE

- 3.5.1. The outputs from the SEELUM modelling will provide quantified assessment for a number of the economic and environmental appraisal sub-impacts (as set out in the Appraisal Specification Summary Table in Appendix B). The remaining sub-impacts will be assessed qualitatively.
- 3.5.2. Chapters 4, 5 and 6 provide further detail on the high-level assessment of each sub-impact for the SPOCs.



## 4 CHAPTER 4 – ECONOMIC APPRAISAL

### 4.1 INTRODUCTION

- 4.1.1. The economic appraisal of the interventions and packages of interventions will assess quantitatively and qualitatively their impacts drawing on the option development work and the SEELUM modelling. Recognising the stage of the study, the high-level definition of the interventions and the nature of modelling outputs available, different benefit streams will not be aggregated and benefit to cost ratios will not be calculated.

### 4.2 ECONOMIC IMPACTS

- 4.2.1. The assessment approach for the economic impacts is set out below in the Appraisal Specification Summary Table. The incremental impact of each package of interventions compared to the BaU Scenario will be assessed as well as the collective impact of all the packages of interventions included in the SPOC.

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
Economy	Business users & transport providers	Use of evidence-based time savings (GJT) produced for input into SEELUM	Changes in GJT are derived for input into SEELUM	Quantitative / Qualitative
	Reliability impact on Business users	Assessment based on nature of intervention and anticipated impact	Drawing on current and future challenges identified in OAR	Qualitative
	Regeneration	Land use development impacts in Level 1 areas	SEELUM produces number of housing units and employment premises	Quantitative
	Wider Impacts	Use of SEELUM to estimate workforce and GVA impacts	SEELUM produces workforce and GVA estimates	Quantitative / Monetary

- 4.2.2. For the assessment of business users & transport providers sub-impact, the inputs derived (based on evidence) will provide a comparison of the magnitude of time savings offered by the different interventions and packages of interventions. This will include a commentary on the significance of this to businesses and transport providers, e.g. economic centres being connected, level of current freight demand.
- 4.2.3. For regeneration and wider impacts sub-impacts, SEELUM outputs for the change in housing units, employment premises, workforce, and GVA changes will be reported for Year 4 after the introduction of the packages of interventions and 2050. The cumulative impact up to 2050 will also be presented. A qualitative assessment of the reliability impact on business drawing on the findings of the OAR will be made.



## 4.3 PUBLIC ACCOUNTS

- 4.3.1. The public accounts address the impacts on the public purse of delivering and operating the interventions and packages of interventions. For the Economic Case for the SPOCs the cost estimates will only consider capital expenditure based on the definition of the interventions<sup>3</sup>.
- 4.3.2. The assessment approach for the public accounts is set out below in the Appraisal Specification Summary Table.

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
Public Accounts	Cost to Broad Transport Budget	Development of cost estimates	Proportionate to level of scheme design	Monetary
	Indirect Tax Revenues	Not assessed at this stage	No revenue modelling being undertaken at this stage	-

- 4.3.3. The construction cost estimates will be prepared to a level of detail commensurate with the maturity of the design of the interventions and the assumptions made for the specification of the impacts modelling. Items and quantities will be priced using historic project data and industry standard published data, with adjustments made to capture the influence that quantity, access, time constraints, site location and conditions will have on labour, plant and materials input costs.
- 4.3.4. A contingency will be added for minor items that have not been measured. Allowances will be made for main contractor's preliminaries and overhead and profit, temporary works and traffic management where required. Allowances for professional fees and STATS upgrades/relocation will be added to the construction cost estimate. To reflect the maturity of the design a risk allowance will be applied.
- 4.3.5. Based upon the assumed delivery programme for the interventions and packages of interventions real growth in forecast construction inflation will be identified and applied.
- 4.3.6. An allowance for land/compensation costs will be assessed by a Land Valuer and included as required.
- 4.3.7. At this stage, indirect tax revenues arising from changes in fuel duty and expenditure on public transport fares will not be considered.

<sup>3</sup> The Financial Case for the SPOCs will assess the implications on funding of potential operating costs and resulting subsidy or surplus positions.

## 5 CHAPTER 5 – ENVIRONMENTAL APPRAISAL

### 5.1 INTRODUCTION

- 5.1.1. An Integrated Sustainability Appraisal (ISA) has been undertaken for each Area Study. The ISA presents the approach and findings for the assessments of the Long List and Short List of interventions and packages of interventions. These assessments have been based upon consideration of key environmental, social and economic constraints and the impact on a range of socio-environmental criteria.
- 5.1.2. The findings from the ISA will form the basis for the assessment of interventions and packages of interventions considered in the SPOC against the TAG Environmental sub-impacts. These will be reviewed and revised as appropriate to capture anticipated implications of the context following the development of an indicative delivery schedule for the interventions, e.g. if an intervention is proposed in the longer-term vehicle emission levels will be assumed to be significantly different than in the nearer-term.

### 5.2 ENVIRONMENTAL IMPACTS

- 5.2.1. The assessment approach for the environmental impacts is set out below in the Appraisal Specification Summary Table. The incremental impact of each package of interventions compared to the BaU Scenario will be assessed as well as the collective impact of all the packages of interventions included in the SPOC.

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
Environmental	Noise	Identification of potentially significant noise impacts and estimate of MECs	ISA assessment undertaken SEELUM produces vehicle-kilometre estimates	Quantitative / Monetary
	Air Quality	Consideration of air quality impacts and estimate of MECs	ISA assessment undertaken SEELUM produces vehicle-kilometre estimates	Quantitative / Monetary
	Greenhouse gases	Use of SEELUM to estimate CO2 impacts of transport activity	SEELUM produces CO2 estimates	Quantitative
	Landscape	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Townscape	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Heritage of Historic resources	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Biodiversity	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
	Water Environment	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative

- 5.2.2. For the assessment of noise and air quality, the conventional approach applying Marginal External Costs (MECs) to the change in vehicle-kilometre, as estimated by SEELUM, will be applied. For greenhouse gas emissions, SEELUM produces estimates of Carbon Dioxide emissions. These quantified metrics will be reported for Year 4 after the introduction of the packages of interventions and 2050. The cumulative impact up to 2050 will also be presented.
- 5.2.3. The rest of the environmental sub-impacts will be assessed on the basis of the qualitative assessment made in the ISA.

## 6 CHAPTER 6 – SOCIAL & DISTRIBUTIONAL IMPACTS APPRAISAL

### 6.1 INTRODUCTION

6.1.1. The assessment of social impacts will be undertaken quantitatively and qualitatively. It will focus upon the sub-impacts for which it is anticipated that it is proportionate to do so to determine material differences between interventions. This reflects the level of information available given the stage of the study and the high-level definition of the interventions.

### 6.2 SOCIAL IMPACTS

6.2.1. The assessment approach for the social impacts is set out below in the Appraisal Specification Summary Table. The incremental impact of each package of interventions compared to the BaU Scenario will be assessed as well as the collective impact of all the packages of interventions included in the SPOC.

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
Social	Commuting and Other users	As for Business Users (under Economy) use of evidence-based time savings (GJT) produced for input into SEELUM	Changes in GJT are derived for input into SEELUM	Quantitative / Qualitative
	Reliability impact on Commuting and Other users	As for Business Users (under Economy) assessment based on nature of intervention and anticipated impact	Drawing on current and future challenges identified in OAR	Qualitative
	Physical activity	Assessment based on nature of intervention and anticipated impact	SEELUM produces active travel demand estimates	Quantitative / Qualitative
	Journey quality	Not assessed at this stage	Interventions at early stage of development and journey quality impacts not anticipated to be material when comparing interventions	-
	Accidents	Estimate of MECs	SEELUM produces vehicle-kilometre estimates	Monetary
	Security	Not assessed at this stage	Interventions at early stage of development and security impacts not anticipated to be material when comparing interventions	-
	Access to services	Assessment based on nature of intervention and anticipated impact	Drawing on geography for interventions and connectivity with centres for services	Qualitative

	Affordability	Not assessed at this stage	Interventions at early stage of development and affordability impacts not anticipated to be material when comparing interventions	-
	Severance	Not assessed at this stage	Interventions at early stage of development and severance impacts not anticipated to be material when comparing interventions	-
	Option values	Not assessed at this stage	Interventions at early stage of development and option value impacts not anticipated to be material when comparing interventions	-

- 6.2.2. For the assessment of commuting and other users sub-impact, the inputs derived based on evidence will provide a comparison of the magnitude of time savings offered by the different interventions and packages of interventions. This will include a commentary on the significance of this to users, e.g. connectivity improvement to employment, education, service opportunities.
- 6.2.3. For physical activity, SEELUM will estimate the change in active travel demand and a qualitative assessment will be undertaken based upon the nature of the intervention. SEELUM's estimate of the change in private vehicle highway-kilometres will be used to monetise accident savings based upon Marginal External Cost values consistent with DfT guidance. These quantified metrics will be reported for Year 4 after the introduction of the packages of interventions and 2050. The cumulative impact up to 2050 will also be presented.
- 6.2.4. Qualitative assessments of the sub-impacts of reliability impact on commuting and other users and access to services will be made drawing on the findings of the OAR and the nature and geography of the interventions.

## 6.3 DISTRIBUTIONAL IMPACTS

- 6.3.1. The Distributional Impacts (DIs) cover the variance of scheme impacts across different social groups in the study area. Both beneficial and adverse DIs will be considered as well as the identification of social groups likely to be affected.
- 6.3.2. For the SPOCs, it is not proposed that a Distributional Impacts Assessment of the interventions and packages of interventions will be undertaken. Following the identification of the proposed interventions to be taken forward and their development, subsequent stages of the business case process will address the assessment in accordance with TAG Unit A4-2 – Distributional Impacts Appraisal (May 2020).

## 7 CHAPTER 7 – APPRAISAL REPORTING

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### 7.1 APPRAISAL REPORTING

- 7.1.1. The approach and results of the assessment of the sub-impacts of the interventions and packages of interventions will be documented in the SPOCs, notably in the Strategic and Economic Cases, consistent with the Five Case Model. An Appraisal Summary Table (AST) will be produced for each SPOC capturing the collective impact of the interventions and packages of interventions that show the greatest promise for further development.
- 7.1.2. Details of the SEELUM modelling and outputs will be documented to provide an appendix for the SPOCs.

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# Appendix A





## RECOMMENDED PACKAGES



- Wessex Thames (WT)
- Gatwick Area (GA)
- South East (SE) - awaiting completion of Stage C
- Solent and Sussex Coast (SS)

## Wessex Thames Area

# Merged Package

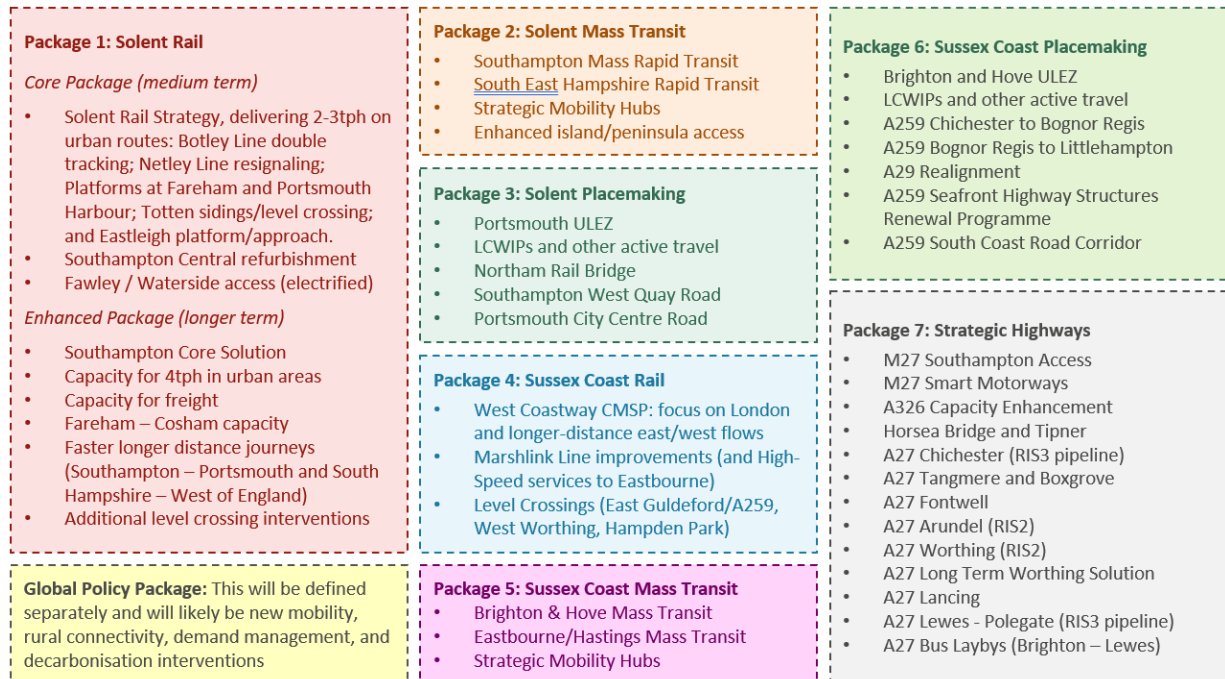
			
<b>Package 1: Rail</b> <ul style="list-style-type: none"> <li>Western and Southern Rail Links to Heathrow</li> <li>North Downs Line Improvements</li> <li>Radial Mainline Improvements</li> <li>Station upgrades</li> <li>Rail freight network enhancements</li> <li>Improvement to rail connectivity out of the region.</li> </ul>	<b>Package 2 and 3: Mass Transit and Active Mobility</b> <ul style="list-style-type: none"> <li>Bus service improvements and infrastructure and priority measure where appropriate between all adjacent major economic hub pairs.</li> <li>Bus-based MRT networks for intra-urban connectivity in all major economic hubs in the area.</li> <li>MRT corridors to be delivered with high quality, segregated cycle infrastructure alongside.</li> </ul>	<b>Package 4: Strategic Highways</b> <ul style="list-style-type: none"> <li>Multi-modal improvements of MRN routes linking M4 and M3</li> <li>Strategic Junction Improvements on M4, M3, A34 and A3.</li> </ul>	<b>Global Policy Package:</b> To be defined separately but likely to include new mobility, rural connectivity, demand management, and accelerated decarbonisation interventions

## Gatwick Area (GA)

<b>Package 1a: Core Rail Package</b> <ul style="list-style-type: none"> <li>Croydon Area Re-modelling</li> <li>Faster Brighton Main Line</li> <li>Faster Arun Valley services</li> <li>Faster East Coastway services</li> <li>Keymer Junction/Wivelsfield</li> <li>Brighton Station Platform</li> <li>Eliminate Joining and Splitting</li> <li>Reinstate Cross Country</li> <li>North East Horsham Station</li> <li>Newhaven Port Freight Access</li> <li>Electrification</li> <li>London Terminal Capacity</li> <li>Newhaven Rail Freight Improvements</li> </ul>	<b>Package 2: Mass Transit</b> <ul style="list-style-type: none"> <li>Fastway expansion               <ul style="list-style-type: none"> <li>Crawley/Gatwick – Horsham</li> <li>Crawley/Gatwick – East Grinstead</li> <li>Crawley/Gatwick – Burgess Hill – Haywards Heath</li> <li>Crawley/Gatwick – Redhill/Reigate</li> </ul> </li> <li>Rural and interurban bus service improvements</li> <li>Strategic Mobility Hubs at Three Bridges and North Brighton</li> <li>Improved Rural Demand Responsive bus/taxi services</li> <li>Integrated and simpler fares, ticketing, and marketing</li> </ul>	<b>Package 4: Highways</b> <ul style="list-style-type: none"> <li>A23 Junction improvements</li> <li>M23 Gatwick Access</li> <li>M23 Redhill New Junction/Link Road</li> <li>A22 Godstone</li> <li>A22 Polegate – Hailsham</li> <li>A22 Smart Road Trial</li> <li>A2270/A2101 MRN Scheme</li> <li>A22 Uckfield Bypass</li> <li>A24 Leatherhead – Horsham</li> <li>A26 Lewes – Newhaven</li> <li>A264 Horsham – Crawley</li> <li>Crawley Western Link Road</li> <li>A272/A283 AQMA's</li> </ul>
<b>Package 1b: Railway Reinstatements</b> <ul style="list-style-type: none"> <li>Reinstate Uckfield – Lewes – Tunbridge Wells</li> <li>Develop bus and active travel benefits on former rail routes</li> </ul>	<b>Active Travel</b> <ul style="list-style-type: none"> <li>Local and regional cycleways</li> <li>NCN Crawley – Brighton</li> <li>NCN Crawley – Chichester</li> <li>Avenue Verte</li> </ul>	<b>Global Policy Package</b> <p>To be defined but likely to include new mobility, rural connectivity, freight, demand management, and accelerated decarbonisation interventions</p>

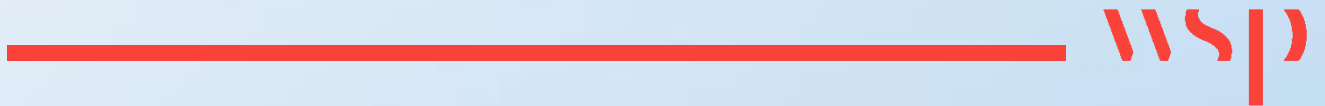
## Solent and Sussex Coast





# Appendix B

## **APPRAISAL SPECIFICATION SUMMARY TABLE**



Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
<b>Economy</b>	Business users & transport providers	Use of evidence-based time savings (GJT) produced for input into SEELUM	Changes in GJT are derived for input into SEELUM	Quantitative / Qualitative
	Reliability impact on Business users	Assessment based on nature of intervention and anticipated impact	Drawing on current and future challenges identified in OAR	Qualitative
	Regeneration	Land use development impacts in Level 1 areas	SEELUM produces number of housing units and employment premises	Quantitative
	Wider Impacts	Use of SEELUM to estimate workforce and GVA impacts	SEELUM produces workforce and GVA estimates	Quantitative / Monetary
<b>Environmental</b>	Noise	Identification of potentially significant noise impacts and estimate of MECs	ISA assessment undertaken SEELUM produces vehicle-kilometre estimates	Quantitative / Monetary
	Air Quality	Consideration of air quality impacts and estimate of MECs	ISA assessment undertaken SEELUM produces vehicle-kilometre estimates	Quantitative / Monetary
	Greenhouse gases	Use of SEELUM to estimate CO2 impacts of transport activity	SEELUM produces CO2 estimates	Quantitative
	Landscape	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Townscape	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Heritage of Historic resources	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Biodiversity	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
	Water Environment	Assessment based on nature of intervention and anticipated impact	ISA assessment undertaken	Qualitative
<b>Social</b>	Commuting and Other users	As for Business Users (under Economy) use of evidence-based time savings (GJT) produced for input into SEELUM	Changes in GJT are derived for input into SEELUM	Quantitative / Qualitative
	Reliability impact on Commuting and Other users	As for Business Users (under Economy) assessment based on nature of intervention and anticipated impact	Drawing on current and future challenges identified in OAR	Qualitative

Impacts	Sub-impacts	Proposed proportionate appraisal methodology	Rationale in support of proposed methodology	Type of Assessment Output (Quantitative/ Qualitative/ Monetary/ Distributional)
	Physical activity	Assessment based on nature of intervention and anticipated impact	SEELUM produces active travel demand estimates	Quantitative / Qualitative
	Journey quality	Not assessed at this stage	Interventions at early stage of development and journey quality impacts not anticipated to be material when comparing interventions	-
	Accidents	Estimate of MECs	SEELUM produces vehicle-kilometre estimates	Monetary
	Security	Not assessed at this stage	Interventions at early stage of development and security impacts not anticipated to be material when comparing interventions	-
	Access to services	Assessment based on nature of intervention and anticipated impact	Drawing on geography for interventions and connectivity with centres for services	Qualitative
	Affordability	Not assessed at this stage	Interventions at early stage of development and affordability impacts not anticipated to be material when comparing interventions	-
	Severance	Not assessed at this stage	Interventions at early stage of development and severance impacts not anticipated to be material when comparing interventions	-
	Option values	Not assessed at this stage	Interventions at early stage of development and option value impacts not anticipated to be material when comparing interventions	-
Public Accounts	Cost to Broad Transport Budget	Development of cost estimates	Proportionate to level of scheme design	Monetary
	Indirect Tax Revenues	Not assessed at this stage	No revenue modelling being undertaken at this stage	-



WSP House  
70 Chancery Lane  
London  
WC2A 1AF

**wsp.com**

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