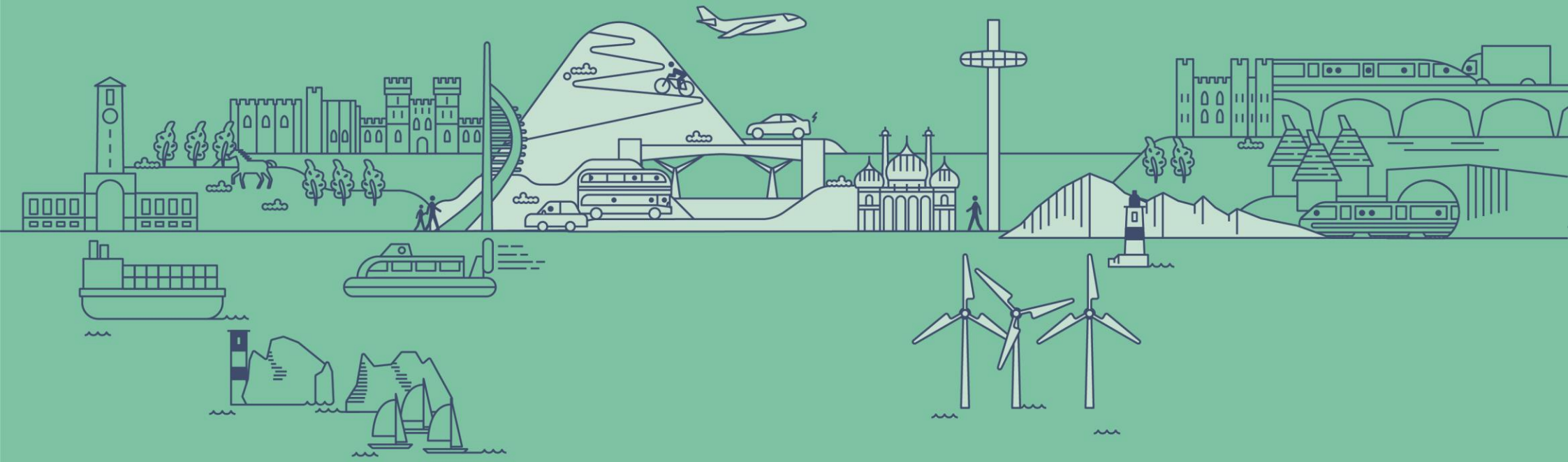
TRANSPORT FOR THE South East



# London to Sussex Coast

## Strategic Programme Outline Case

Version 2.4

June 2022

# Part 1

## Introduction

# Background

Transport for the South East (TfSE) developed a Transport Strategy which was adopted in 2020. They are currently delivering a programme of Strategic Studies that will prioritise interventions to 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.

## Geographic Scope

The Strategic Studies focus on the key transport corridors that serve and connect the South East's Major Economic Hubs and international gateways. They also play an important national role in connecting the rest of the UK to some of the busiest ports in the country. The map overleaf in **Figure 1.1** shows the areas covered by each SPOC. The areas are defined as follows:

- **Solent and Sussex Coast** – encompassing the strategic corridors that serve and connect the two largest conurbations in the South East, covering an area from the New Forest in Hampshire to Hastings in East Sussex.
- **London to Sussex Coast** – 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 –** encompassing the transport corridors connecting the Channel Tunnel and Port of Dover to London, as well as serving Kent, Medway, and East Sussex.
- **Wessex Thames –** encompassing the strategic corridors and Major Economic Hubs in Berkshire, North Hampshire, and West Surrey.

Through development of the evidence base for each study; option identification; and option assessment, the emerging packages of shortlisted intervention were more coherent when assessed and described at a place based level, rather than describing orbital components of a package in one study and radial components in another. Whilst there is no 'perfect' geography, a more place-based approach has been endorsed for the Strategic Programme Outline Case, reducing the levels of geographical overlap.

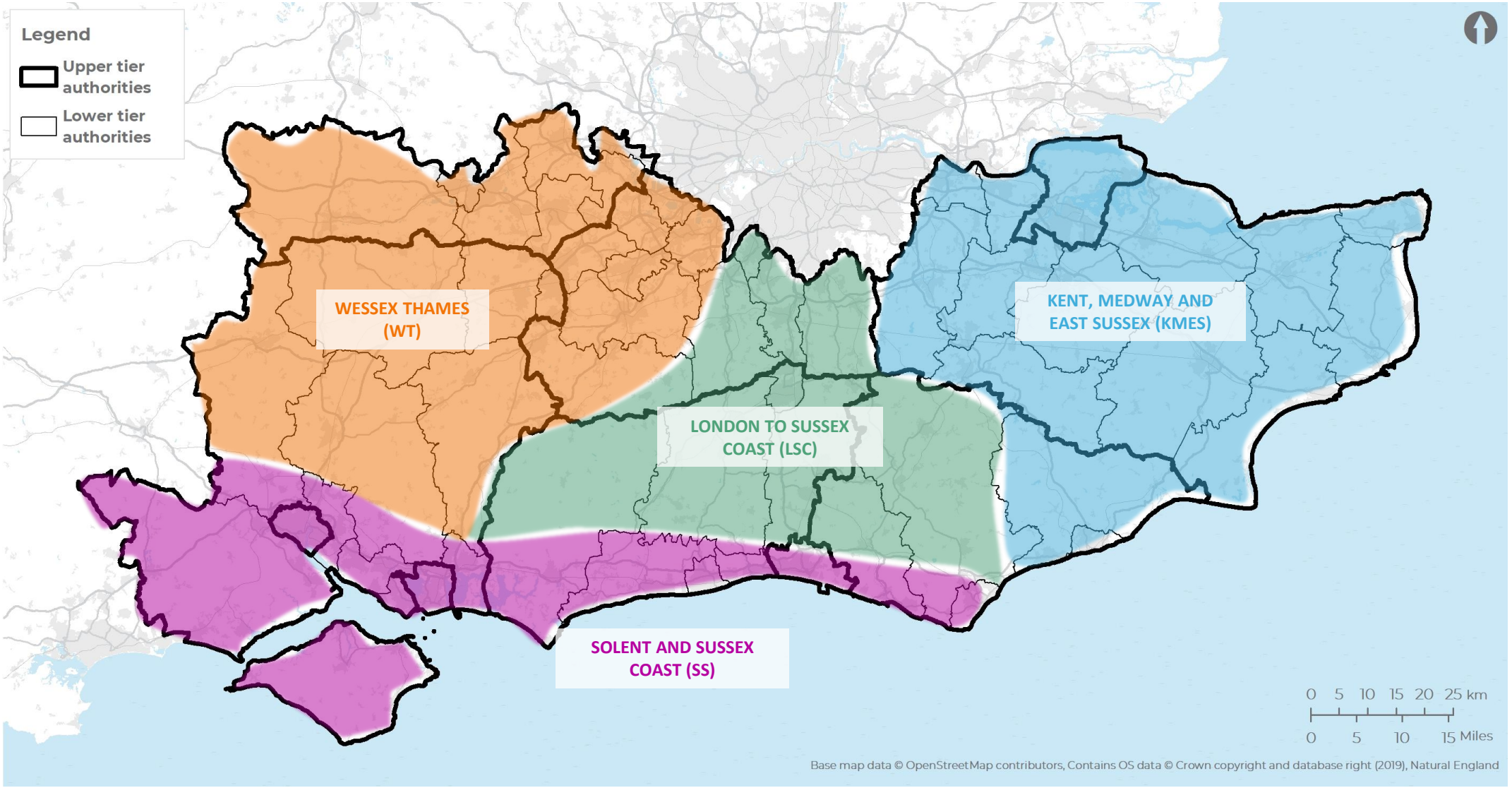
## Changes in Geographic Scope

The geographical scope of the technical programme of work underpinning this study is slightly different in Stage D compared to Stages B and C. In summary

- The **Outer Orbital Area Study** has become the **Solent and Sussex Coast** . The Isle of Wight (IoW) is now within the scope of this study, whereas East Kent is no longer in scope.
- The **Inner Orbital Area Study** has been merged with the **South West Radial Area Study** to create the **Wessex Thames Study**. The Upper Tier Authorities are largely the same as for the South West Radial Area Study (minus Kent and IoW).
- The **South Central Radial Area Study** has remained the same area, but been renamed the **London to Sussex Coast Study**, but Kent is no longer in scope.
- The **South East Area Study** remains unchanged in geographical scope, but has been renamed **Kent, Medway and East Sussex Study**.

# Geographic scope of the four SPOC Areas

## Figure 1.1: Geography of Area Study programme's four Strategic Programme Outline Cases



# Technical Scope and Structure

## Technical Scope

This document is the **Strategic Programme Outline Case (SPOC)** for the **London to Sussex Coast**. The business case set out in this document is for a programme of interventions which has been developed to a level of detail aligned with a conventional 'single-scheme' Strategic Outline Case or pre-Strategic Outline Business Case. For this reason it has been given the description of Strategic Programme Outline Case (SPOC).

This document sets out the key issues, challenges and opportunities relevant to their scope, and show how targeted interventions will enable TfSE and its partners to deliver TfSE's Transport Strategy for the South East. It describes how the Project Team has worked with stakeholders to develop Packages of Interventions that are designed to make life better for people, for businesses and, for the environment of the South East.

The Strategic Programme Outline Case has been developed in line with business case guidance set out in HM Treasury's Green Book and Department for Transport Projects Analysis Guidance (TAG). The level of detail provided is proportionate to the current stage of programme and scheme development. The strategic dimension is at a particularly well progressed stage, with the other four dimensions being at earlier stages of development. Further detail on how this document aligns with TAG requirements is provided in a check list at the beginning of each chapter.

The outcome of these Area Studies will form the 'blueprint' for TfSE's Strategic Investment Plan. This will influence and help shape investment decisions by government and national bodies, such as Network Rail and National Highways, and local bodies, including Local Transport Authorities.

## Structure and Contents

**The rest of this report follows the Five Case Model for Business Cases:**

- **The strategic dimension (Part 2)** sets out the evidence and need for intervention and objectives. This shows clear alignment with the Transport Strategy and vision for the area.
- **The economic dimension (Part 3)** outlines the impacts of the SPOC Packages of Interventions and describes the overall costs and benefits of the whole programme.
- **The financial dimension (Part 4)** presents the funding requirement for the delivery of the programmes, their affordability and funding sources.
- **The commercial dimension (Part 5)** describes the commercial viability of the Packages of Interventions and outlines the procurement options to ensure good value for money in their delivery.
- **The management dimension (Part 6)** sets out the considerations for the effective delivery of the Packages of Interventions, including governance and risk management.

# Process

This Strategic Programme Outline Case is a key deliverable for the London to Sussex Coast Technical Programme of work. **Figure 1.2** below shows the stages and steps that are being delivered as part of this programme of work to date.

**The programme comprises five Stages, which in turn are formed of twelve steps.**

The first stage, **Stage A (Mobilisation)**, was completed in September 2020. This stage helped define the leadership team, partners, Subject Matter Experts, methodology and a Delivery Plan for the technical programme.

This led onto **Stage B (Evidence Base)**, which undertook an in-depth review of the current and future issues and opportunities in the London to Sussex Coast. This covered a wide range of economic, social and environmental issues and opportunities.

Stage B also identified corridor specific transport issues and defined the study's Vision, Objectives, and Problem Statements.

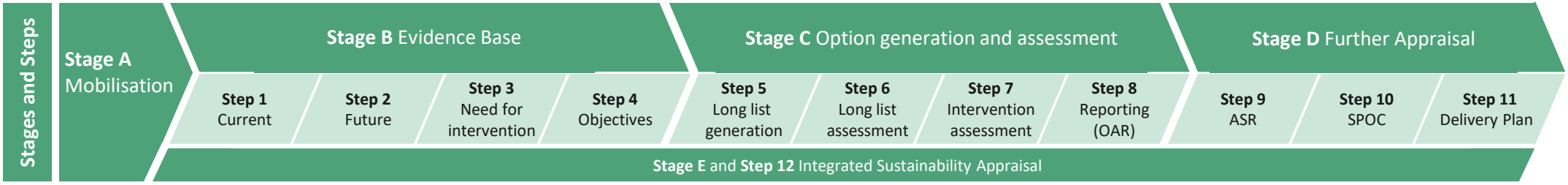
An **Options Assessment Report (OAR)** was then prepared, which describes how a Long List of intervention options was prioritised to develop Packages of Interventions for the London to Coast Area.

This SPOC is a key deliverable of **Stage D,** which will also deliver a **Delivery Plan**.

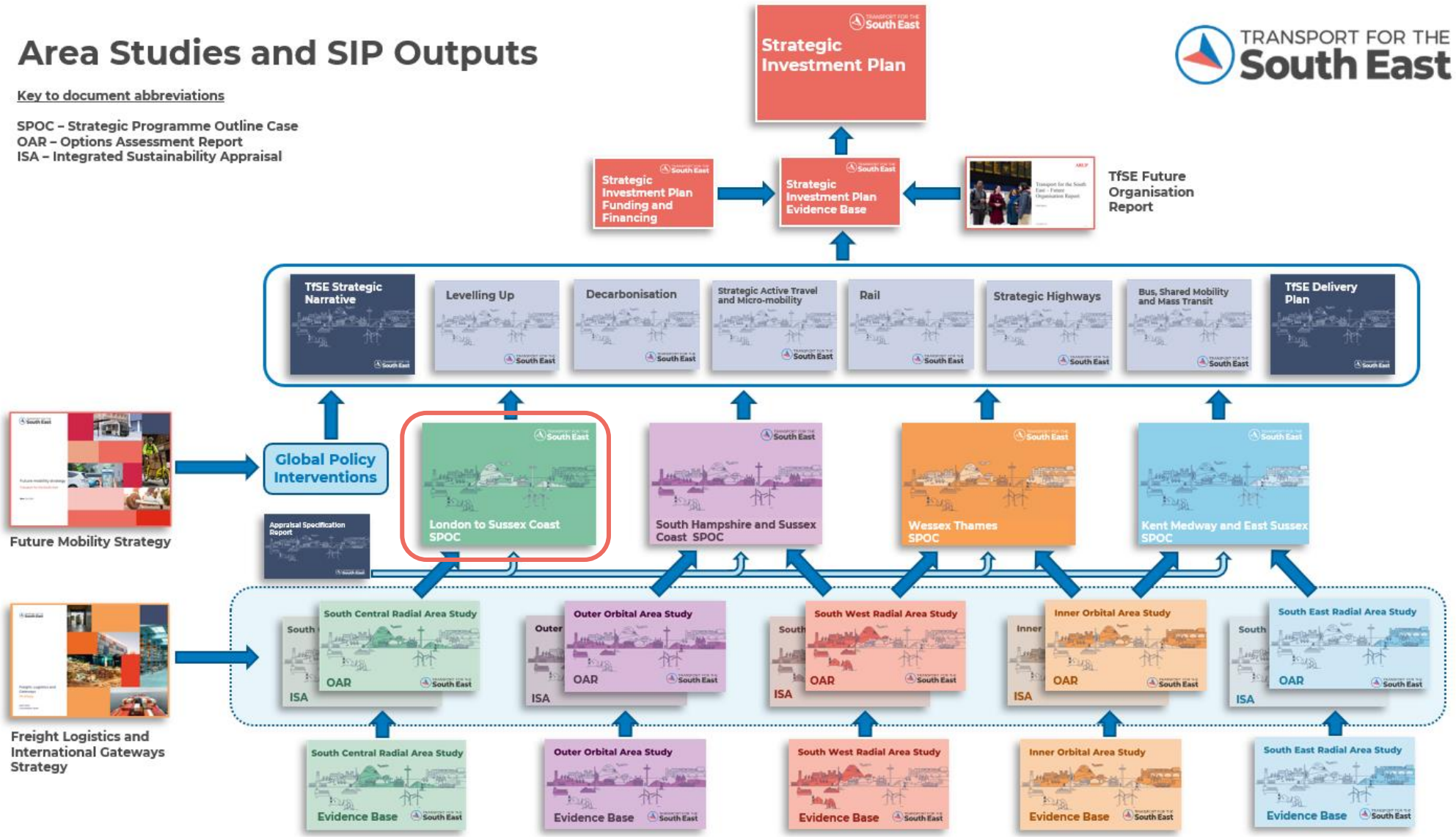
**Stage E (Integrated Sustainability Appraisal)**, which runs concurrently with all stages, will seek to ensure objectives, problem statements and interventions can be achieved through sustainable measures.

**Figure 1.3** overleaf shows the relationship between the SPOC and its partners SPOCs for different geographies, as well as their relationship to the underpinning evidence bases and Options and Assessment Reports, and how the feed into the Strategic Investment Plan.

**Figure 1.2: Overview of London to Sussex Coast Area Technical Programme**



## Figure 1.3: Area Studies programme and Strategic Investment Plan document hierarchy



# Key Stakeholders in this Study

## Project Team

**The London to Sussex Coast technical programme is led by a TfSE Project Management Office and is supported by a Technical Advisor Team.**

The Technical Advisor Team is led by **Steer**, who led the development of the Evidence Base (Stage B of this project).

Steer is supported by:

- **Atkins**, who led the Options Stages of the project (Stage C); and
- **WSP**, who provide significant support to the Delivery (Stage D) and Integrated Sustainability Appraisal (Stage E) stages.

Most of the technical work and content delivered for the SPOC was developed by WSP and Steer. Atkins has supported this work through developing the Multi Criteria Assessment Framework (MCAF) that was used to qualitatively assess proposed interventions.

For the purposes of this report, TfSE's Project Management Office and the Steer/Atkins/WSP Technical Advisor Team are referred to as the 'Project Team'.

## Stakeholders

**On the mobilisation of this study, TfSE and the Technical Advisor team undertook a stakeholder mapping exercise for the London to Sussex Coast Area to categorise key organisations and individuals according to their interest and influence.**

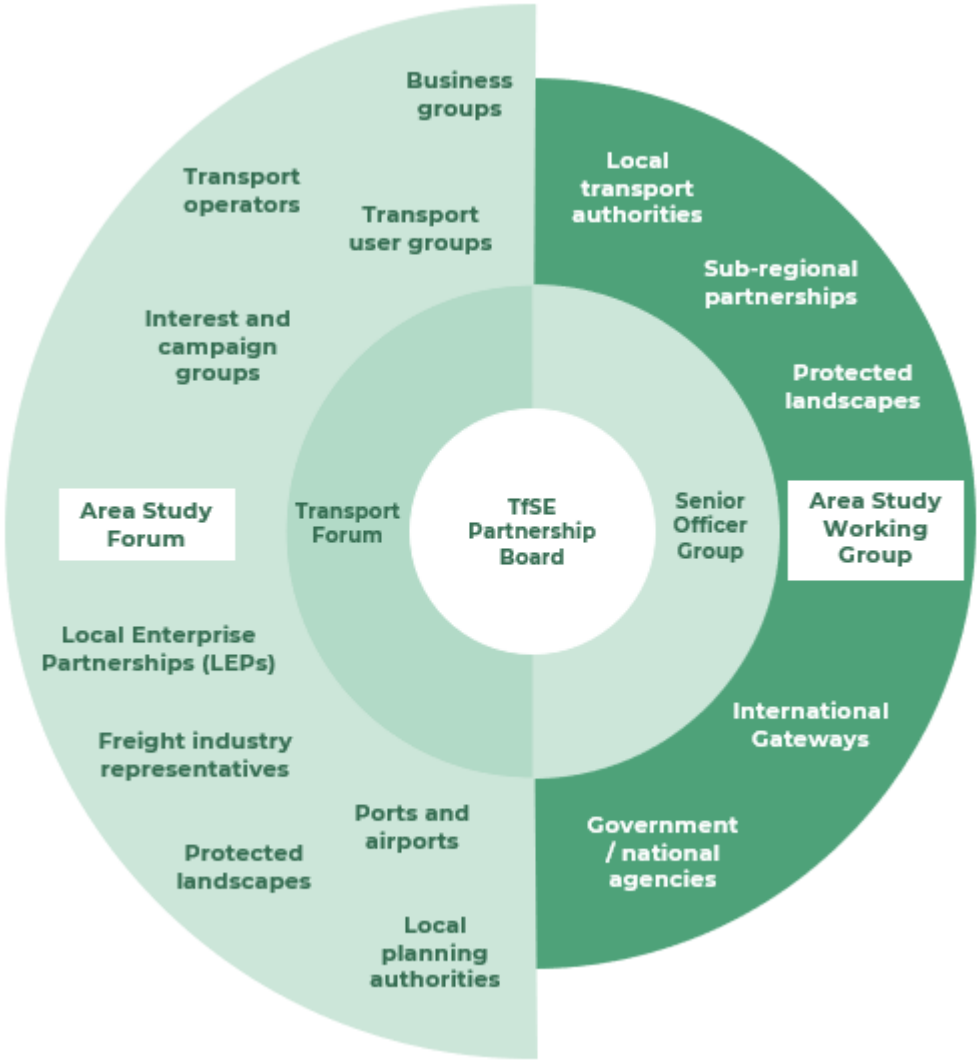
- **Tier 1 Stakeholders** have a direct interest and involvement in leading and supporting investment in the London to Sussex Coast area. These stakeholders include Local Transport Authorities (County Councils and Unitary Authorities), National Highways, Network Rail, a representative from a Local Enterprise Partnership, and the South Downs National Park.
- **Tier 2 Stakeholders** potentially have a direct influence over the success of the Area Studies via their development process or contents of the studies. This group includes Local Planning Authorities (Districts and Boroughs) operators, International Gateways, other statutory bodies (e.g. Homes England and Environmental/Heritage bodies), and special interest groups such as environmental groups.
- **Tier 3 Stakeholders** are those parties that may influence Tier 1 and 2 Stakeholders through their activities, including through the media/social media and public affairs. These include Town and Parish Councils, residents' groups, education and health providers, and representatives from youth councils.
- **Tier 4 Stakeholders** are any other stakeholders who have limited interest and/or influence in this work and will therefore not be directly engaged in the Area Study programme.

Most Tier 1 stakeholders at an "officer-level" have been engaged, among other channels, through an **Area Study Working Group** to help steer the direction and content of each study. The membership of this group is shown in **Figure 1.4** overleaf**.**

Most Tier 2 stakeholders at an "officer-level" have been engaged, among other channels, through an **Area Study Forum**, to provide input and "check and challenge". The membership of the forum is shown in **Figure 1.5** overleaf**.**

# Stakeholder Engagement

## Figure 1.4: London to Sussex Coast - Area Study Working Group membership




The role of the Working Group is to provide technical leadership to the Area Study, to drive the area study and make key decisions to allow the study to progress to schedule.

The group will provide professional, technical and strategic insight to TfSE and the consultants commissioned to develop the study.

### Area Study Working Group

**Local transport authorities**
East Sussex County Council
Brighton & Hove City Council
West Sussex County Council
Surrey County Council

**Protected landscapes**
South Downs National Park Authority

**International Gateways**
Gatwick Airport

**Government / national agencies**
Department for Transport
Network Rail
National Highways

# Stakeholder Engagement

## Figure 1.3: London to Sussex Coast - Area Study Forum membership

**Area Study Forum**

**Interest groups**
Coastal West Sussex
Friends of the Earth
Motorcycle Action Group
Railfuture
Sustrans
Thames Gateway Tramlink
Transport Action Network

**Environmental groups**
Campaign to Protect Rural England
South Downs Society/SCATE

**Public transport user groups**
Buses in Fleet
South East Community Rail Partnership
Transport Focus

**Rail operators**
Eversholt Rail
Eurovia
Govia Thameslink Railway
Rail Delivery Group
South Western Railway

**Bus and coach operators**
Brighton and Hove Buses
Confederation of Passenger Transport
Stagecoach

**Government / national agencies**
Homes England
Transport for London

**Local enterprise partnerships**
Coast to Capital LEP
Enterprise M3 LEP
South East LEP

**Business groups**
Confederation of British Industry (CBI)
Gatwick Diamond Business Initiative
Greater Brighton Economic Board
Kent and Medway Economic Partnership

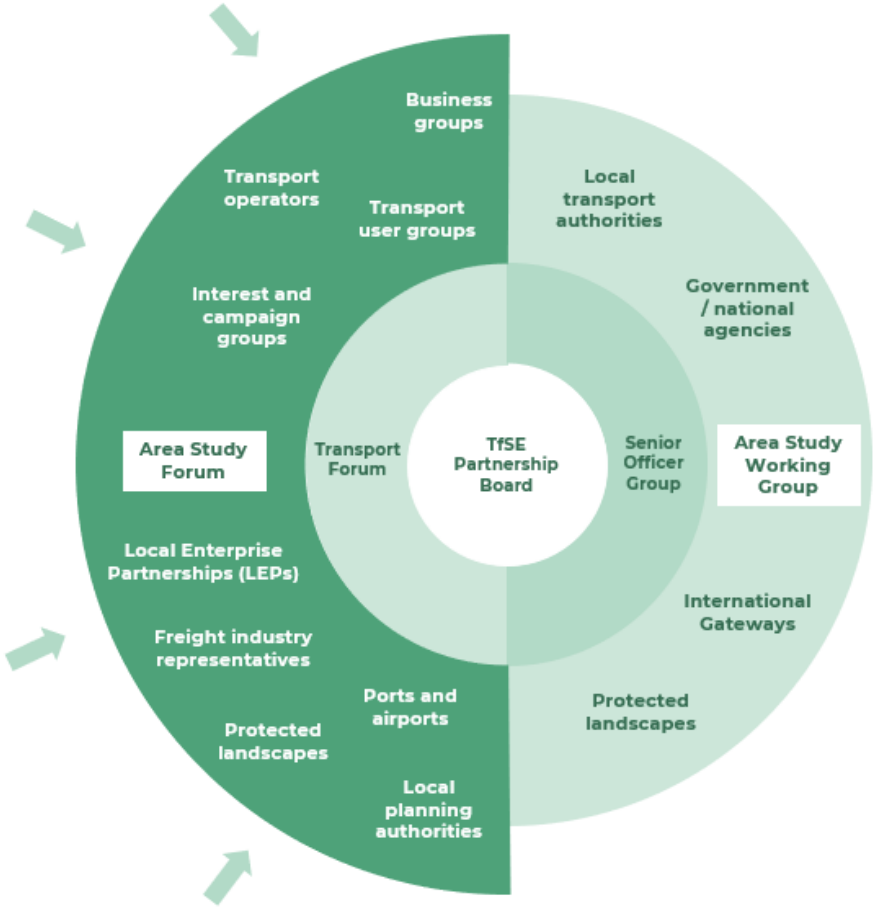
**Freight**
Chartered Institute of Logistics and Transport
Logistics UK
Rail Freight Group
Road Haulage Association
University of Kent

**International gateways**
Newhaven Port Authority
Shoreham Port Authority

**Local planning authorities**
Adur District Council
Arun District Council
Brighton & Hove City Council
Chichester District Council
Crawley Borough Council
Croydon Council
Eastbourne Borough Council
Epson and Ewell Council
Horsham District Council
Lewes District Council
Mid Sussex District Council
Mole Valley Council
Reigate and Banstead Borough Council
Tandridge District Council
Tunbridge Wells Borough Council
Wealden District Council

The role of the Area Study Forum is to provide stakeholder expertise, intelligence and advice to the Working Group and project team. The forum will add to the knowledge base of both TfSE and the consultants commissioned to develop the study.

Members will offer local and strategic insight to key themes, helping to develop strategic outputs that are of benefit the entire area study geography.



# Stakeholder Engagement

## Tier 1 Stakeholders

**Most Tier 1 Stakeholders were invited to join this study's Area Study Working Group (see Figure 1.4) and play a direct role in leading and shaping the study.**

These stakeholders have helped TfSE develop the Vision, Objectives, and Problem Statements for the study.

These stakeholders provided significant input into the development of the long list of interventions that were assessed using the MCAF and have moderated the initial results from the MCAF long list assessment.

They also supported the strategic assessment of each intervention and advised on the extent to which each long listed intervention aligns with their organisations' priorities.

## Tier 2 Stakeholders

**Further (remaining) Tier 1 Stakeholders and all Tier 2 Stakeholders were invited to join a Stakeholder Forum (see Figure 1.5).**

This Forum has met three times:

The first workshop focussed on identifying stakeholder aspirations for the studies and understanding their perceptions of the strengths, weaknesses, opportunities, and challenges of the area.

The second workshop focussed on validating/amending the Vision, Objectives, and Problem statements developed by the Area Study Working Group. It also provided these stakeholders with an opportunity to contribute to the long list of interventions.

A third workshop focussed on validating packages and delivery.

## Other Stakeholders

**MPs have been further engaged through a bespoke process led by TfSE.**

This process has engaged MPs on the Area Studies at two stages. Firstly, a questionnaire was sent to all MPs within the TfSE Area where they had the chance to identify issues, opportunities and key schemes. Any insights drawn from these discussions (e.g. whether an MP supports or does not support a particular intervention) was incorporated into the policy alignment scores.

In the latter stages of the project MPs have been invited to briefing sessions for each of the SPOC areas, where packages of interventions have been presented and feedback has been invited.

## Other Stakeholders

**Any other stakeholders were not directly engaged in this part of the study.**

Any organisation that subscribes to TfSE's newsletter has received regular updates about study progress. These stakeholders will also have an opportunity to engage with TfSE when the Draft Strategic Investment Plan is published for consultation.

# Part 2

## Strategic Dimension

# Introduction

## Overview of the Strategic Case

**The Strategic Case makes the case for change in the London to Sussex Coast Area.**

The Strategic Case includes:

- An overview of the SPOC's geographical and policy context and key challenges and opportunities for the SPOC area;
- The Vision, Objectives, and Problem Statements to be addressed by the SPOC;
- Articulation of the case/need for intervention;
- A description of the Interventions developed for the SPOC;
- Commentary on how the Packages were developed and sifted;
- Commentary on how the Packages align with the Vision, Objectives, Problem Statements, and National/Local/Policy alignment; and
- Evidence of local support for each Package of Interventions.

## Contents

**Part 2b describes the key challenges and opportunities identified for this study.**

These include:

- an analysis of **socioeconomic outcomes** in the London to Sussex Coast Area;
- opportunities for **better mass transit** systems in the largest conurbations;
- opportunities for **better interurban and intra-urban rail services** in the area; and
- a discussion of long-standing challenges with the existing **Strategic Road Network**.

**Part 2c outlines Problem Statements this study aims to address:**

- **Problem Statements** are also important as they describe the challenges the area faces today that key stakeholders wish to see addressed.

**Part 2d describes the impact of doing nothing and the "baseline" for this study.**

**Part 2d describes the Strategic Vision and Objectives for this study.**

**Part 2e describes the Packages this study proposes for the London to Sussex Coast**.

This includes:

- a description of the **Packages** of Interventions that have been developed for the London to Sussex Coast.

**Part 2f shows how the interventions outlined in Part 2e deliver the vision and objectives of the London to Sussex Coast SPOC.**

This includes:

- a description of the inputs, outputs, outcomes, and impacts of the packages - in line with the Theory of Change Framework; and
- commentary showing how the Packages, when combined, deliver the Vision and Objectives of this study, and address the study's Problem Statements.

# Alignment with Department for Transport Business Case Guidance

## The table below sets out the DfT's requirements for the Strategic Dimension and the level of detail expected at Strategic Outline Case stage. The final column of the table shows where the Strategic Dimension addresses each requirement

| TAG Issue | TAG Requirement | Progress at SPOC | Reference |
|---|---|---|---|
| Organisation overview | An outline of the strategic priorities and responsibilities of the organisation(s) responsible for the proposal (for example DfT, Highways England, or the Local Authority) | Complete | Introduction (Background) |
| Business strategy and wider strategies | Determine the strategic fit of the proposal to the priorities of relevant organisations, the government (for example, the ambition to achieve net zero greenhouse gas emissions by 2050) and the regional, combined and local authorities in scope | Complete | Introduction (Policy Context) |
| Interdependencies | Set out the strategic portfolios, programmes and projects that the investment may interact with or link to: do they contribute towards achieving the same outcomes? Where does the intervention sit within this hierarchy? | Complete | Part 2a, Part 2b |
| Existing arrangements and the impact of not changing | Provide a clear picture of the current service model that serves as the baseline from which to measure future improvements. If applicable, set out the geographical scope of the investment and the economic, social and environmental context of the area: what is the impact of not intervening? | Complete | Part 2a, Part 2b |
| Business needs and service gaps | Determine the organisation's business needs: these are internal and external factors that are needed for the transport intervention to fulfil its objectives | Complete | Part 2a, Part 2b |
| Problem identification | Describe the problem(s) identified to determine the rationale: what is the evidence base underpinning the problem? Does it justify the need for a transport intervention? | Complete | Part 2a and 2b |
| SMART spending objectives | Establish SMART objectives for what the investment sets out to achieve: these should be specific, measurable, achievable, relevant and time-constrained. SMART objectives should align to the strategic priorities identified and provide clear measures of success | Complete | Part 2d |
| Scope | Explain the scope of the intervention: what will it deliver? What is out-of-scope? | Complete | Part 2e |
| Measures of success and planning for delivery | Set out what constitutes a successful delivery of the SMART spending objectives and determine the delivery arrangements. This can be conducted via workshops as per the HM Treasury business case guidance | Outline | Part 2f |
| Strategic assessment of investment options | Evaluate the longlist and shortlist of options against the SMART objectives and assess their impact on wider strategic priorities: options that do not contribute to achieving these priorities should be discounted | Outline | OAR |
| Strategic benefits | Describe, using evidence, the strategic benefits this proposal will provide through achieving the SMART spending objectives. Identify a clear theory of change that provides a comprehensive description of how the transport investment will result in those outcomes and impacts | Outline | Part 2d and 2e |
| Risks and constraints | Specify the main risks to achieving the SMART objectives: how will risks be mitigated and managed? Outline the constraints that could impact the successful delivery of the proposal including any relevant legislation and legal obligations that the investment engages with | Outline | Financial and management cases |
| Stakeholders' views and requirements | Outline the main stakeholder groups and their contribution to the development of the proposal, including their views and any conflicts between groups | Outline | Introduction (Stakeholders)<br>Seeking views through public consultation Summer 2022 |

# The London to Sussex Coast Area

The London to Sussex Coast Area is one of the most prosperous and dynamic areas of the South East. Its transport networks perform a key link between the Sussex Coast, the Gatwick Diamond, and London. It is home to some of the fastest growing communities in the UK. However, some communities and sections of society risk being left behind by the area's prosperity.

## Profile

The London to Sussex Coast Area links the largest conurbation in the UK (Greater London) with the second largest conurbation in the South East. The latter "Sussex Coast" built up area runs from Bognor Regis in the west to Eastbourne in the east. Brighton and Hove sits at the centre of this thriving conurbation.

Gatwick Airport – the busiest single runway airport in the world pre-COVID (46.6m passengers in 2019) – lies half- way between both conurbations. Gatwick supports a cluster of Major Economic Hubs that are known as the "Gatwick Diamond".

The area is also home to the North Downs, which lie between the Gatwick Diamond and London, and the South Downs, which lie between the Gatwick Diamond and Brighton. The location of these protected areas has heavily influenced development planning, and explains why significant growth is focussed on the Gatwick Diamond.

## Transport Networks

The area's transport networks support significant north-south demand.

Rail demand is particularly intense between Gatwick Airport and East Croydon. Gatwick Airport enjoys the highest public transport mode share outside London, which reflects the quality of the rail service provided here.

There is a high-quality highway between the M25 London Orbital motorway (the M23 /A23) and the A27 South Coast expressway. Part of this highway has recently benefitted from investment in being upgraded to a Smart Motorway.

The area is home to several successful bus networks – including the Fastway Bus Rapid Transit network in Crawley, which has enjoyed triple digit percentage growth in the last decade. Bus services outside urban areas, however, have struggled to maintain market share.

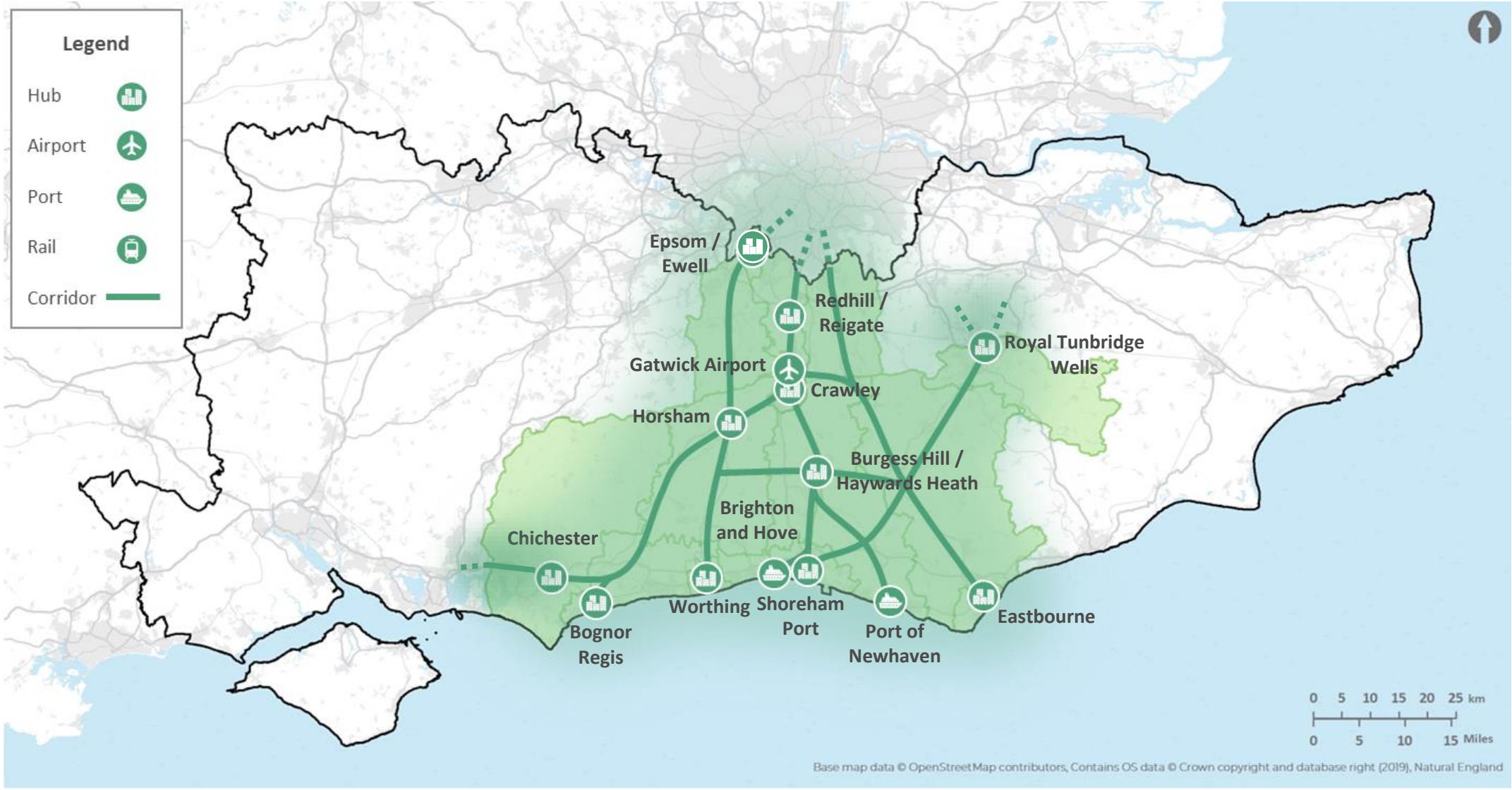
## Key Challenges

The London to Sussex Coast Radial area is a generally prosperous area. However, this prosperity, combined with development planning constraints, has resulted in the least affordable housing of all the areas included in the South East Area Study programme. To address the challenge, significant housing development is planned in the Gatwick Diamond area. This will place additional demand on the transport network, especially if employment growth is higher in London and Brighton than it is in the Gatwick Diamond area (which is quite likely as the aviation industry is still recovering from the COVID-19 pandemic). There are also significant challenges with resilience and east – west movements in this area.

This suggests transport investment will need to be targeted at interventions that support housing growth, deliver more sustainable transport outcomes, and strengthen the resilience of the area's transport networks.

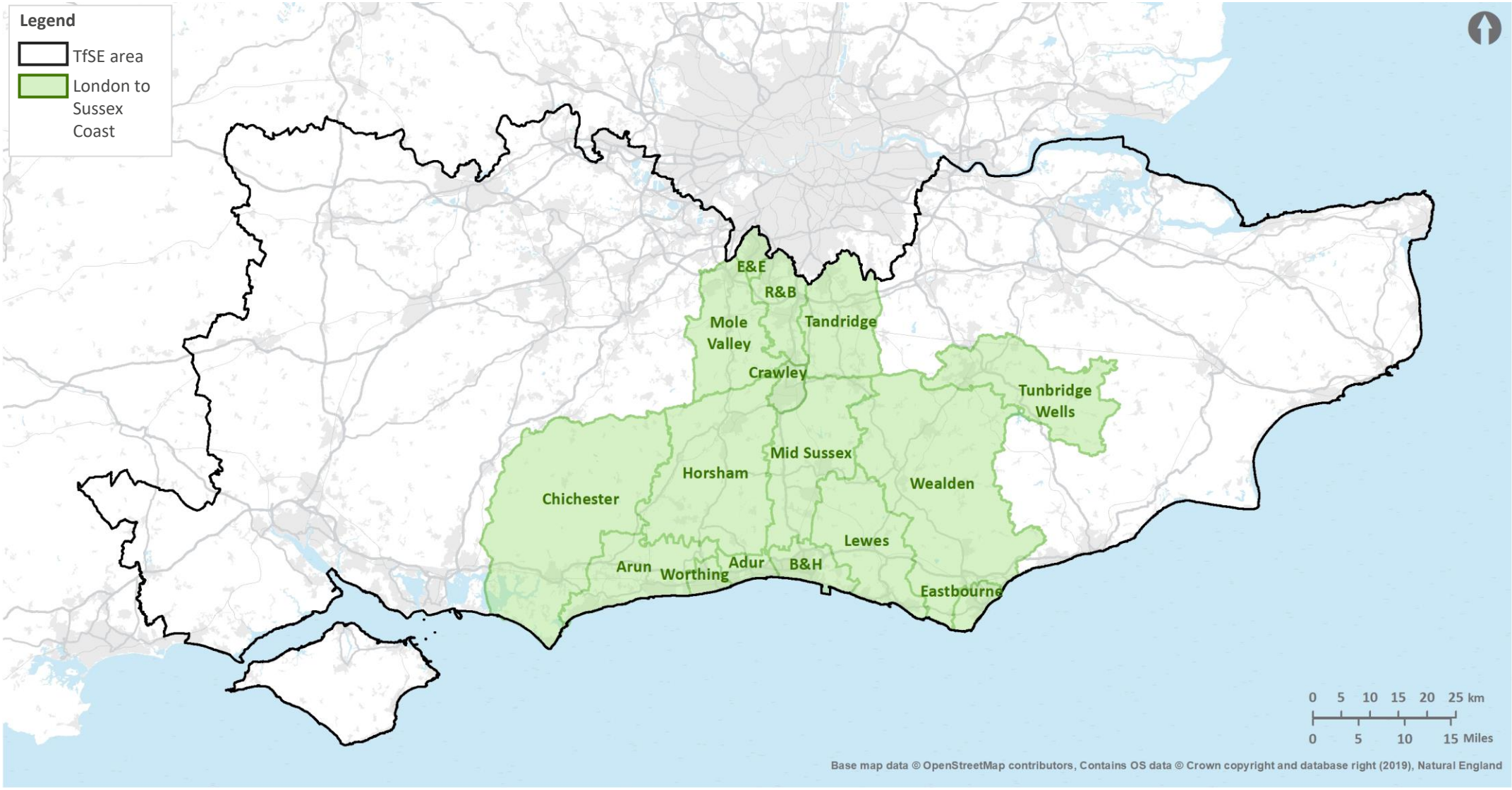
# London to Sussex Coast – Corridors, Major Economic Hubs and International Gateways

The London to Sussex Coast Area encompasses the strategic radial rail and highway corridors between South London and the Sussex Coast. The largest Major Economic Hub in geography is Brighton and Hove, which, with Worthing, forms the second largest conurbation regionally. Other Major Economic Hubs include Chichester, Bognor Regis, Eastbourne, Epsom / Ewell, Redhill / Reigate, Crawley, Horsham, Burgess Hill / Haywards Heath, Redhill and Reigate, and Royal Tunbridge Wells. Global Gateways include Gatwick Airport and Port of Newhaven.



# London to Sussex Coast – Local Authorities

The London to Sussex Coast area includes the Local Transport Authority areas of West Sussex, Brighton and Hove; large parts of East Sussex and Surrey; and parts of Kent. The Local Planning Authorities that are included in this area are labelled on the map below. The area is also served by two Local Enterprise Partnerships (LEPs) – running from west to east – Coast to Capital LEP, and South East LEP.



# National and International Policy Context

A policy review was conducted to determine the **strategic fit of the proposal** to the priorities of relevant organisations. Firstly, national and international policies, which set a framework for the future of planning, climate change and digital technology. They aspire to deliver transport networks that work better for the people, the economy, and the environment.

## Climate Change/Decarbonisation Policies

The declaration of a UK climate emergency and associated legally binding Net Zero targets (by 2050) has led to an increased focus on the importance of decarbonisation across all sectors, but particularly in transport.

**Decarbonising Transport, A Better, Greener Britain (2021),** sets out the political agenda for decarbonising all forms of transport and the UK's path to net zero transport. It comes in the wake of several other critical national (e.g. the **Clean Growth Strategy**). Highways England have set out their **Road Map to Net Zero** (2050) with Network Rail setting out its goal for Net Zero by 2050 in their **Environmental Sustainability Strategy**.

Understanding of how these changes will be delivered is provided in policies such as **Gear Change**, which aims to deliver significant improvements to cycling infrastructure, and **Bus Back Better**, which sets out the government's vision for bus services. We also expect to see wider adoption of placemaking policies such as "15-minute neighbourhoods" as a response to the climate change challenge.

## Levelling-up and Planning Reform

In 2022, the Department for Levelling-up, Housing and Communities launched its long-awaited **Levelling-up White Paper**. Identifying 12 priorities of "Missions" for the UK to raise socio-economic outcomes of left behind communities, transport iso ne of the priorities and has a key role in supporting a further 10 Missions.

Planning in England is governed at a national level by a **National Planning Policy Framework**, which promotes sustainable development and has several environmental themes. This framework guides development of **Local Plans** and sets policy for the development of national and international transport networks.

The government has indicated an ambition to reform the planning system, laid out in the White Paper: **Planning for the Future (2020)**. Planning reforms are expected to focus on simplifying the planning system and making better use of data and digitalisation to help make the planning system work better.

Planning policy is increasingly emphasising the importance of building more new homes and making them more affordable and readily available to those living across the country. This closely follows the policy outlined in the **Housing White Paper 2017**.

## Emerging Technology Policies

Technology will be critical for helping the transport network to continue developing over forthcoming years. Many believe recent trends in the adoption and penetration of emerging technologies have been accelerated by the advent of COVID-19.

Government policy is also evolving fast. In **Road to Growth** and the latest **Road Investment Strategy**, Highways England have emphasised the importance of using new technology across our highway network.

The DfT's policy document **Future of Mobility: Urban Strategy** (released in 2019) focuses how artificial intelligence and electrification will shape the transport network and deliver widespread benefits.

It is anticipated that the **Future of Mobility: Rural Strategy,** which is expected to be released imminently, and the encompassing **Net Zero Strategy**, due later this year, will further encourage greater uptake of low-emissions vehicles, in line with the long-term Transport Decarbonisation plan of banning the sale of petrol and diesel vehicles by 2030.

# Regional and Local Policy Context

Regional and local policies recognise the strength of the South East's natural assets and understand the importance of balancing future growth with social and environmental needs. The recently adopted Transport Strategy for the South East provides a framework for the implementation of national and regional priorities at a local level.

## Economic Strengths

The region's economic strengths are a key theme which run through several documents, for example, the **Economic Connectivity Review** showed that the area had the highest economic productivity outside London.

The importance of international gateways is noted in several policy documents, for example, the Highways England **Route Strategies,** and the several **Local Transport Plans** in the area**.**

The region's proximity to London is also a key driver of economic growth. However, the area's reliance on London is seen as a risk in documents such as the **London South East Market** network rail study and the **West Sussex Connectivity Modular Strategic Study.**

Many stakeholders in the South East wish to see its own major economic hubs, which include some of the largest conurbations in England, establish themselves as self-contained, high-performing, cities. This can be supported by improving connectivity within and between these conurbations to enable them to function (i.e. agglomerate) cohesively and efficiently.

## Planning for People and Places

At a local level, the importance of places and placemaking is emphasised in several policy documents. While this is cited in all Local Transport Plans and many Local Plans in the area, it is a particular focus for the urban authorities in the Outer Orbital area.

This is a key theme of the recently developed **TfSE Transport Strategy** for **the South East**, which aims to shift transport planning away from "planning for vehicles" towards "planning for people" and "planning for places", and net-zero carbon emissions by 2050 at the latest.

**Planning for vehicles** acknowledges that some local highways schemes may be needed to support immediate housing needs and congestion hotspots in the Outer Orbital area.

However, the focus also needs to consider **planning for people** (as a means of considering all modes of transport, especially healthy and public transport) and **planning for places** (which required much better integrated special, transport, services, and other infrastructure planning at a regional and local level.

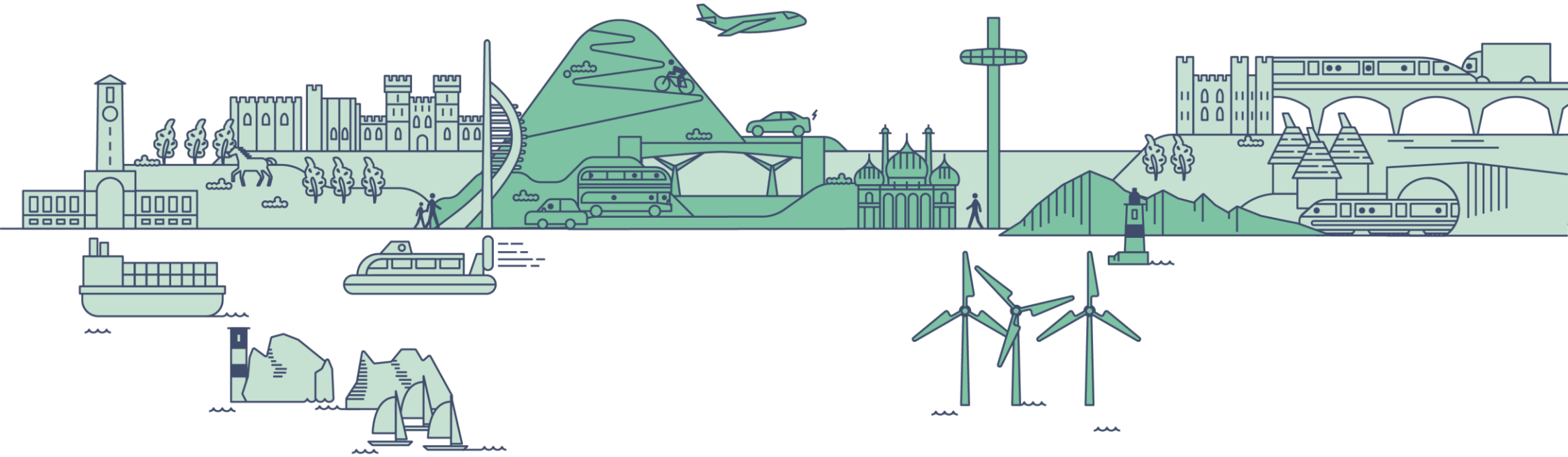
## Local Response to COVID-19

The COVID-19 pandemic has clearly caused a significant rise in uncertainty around local planning. Local budgets are coming under increased pressure, and behavioral changes mean that traditional planning approaches have rapidly become obsolete.

In several areas, Local Industrial Strategies have been delayed as a result of the pandemic, and increased levels of uncertainty.

Several Local Enterprise Partnerships have released COVID-19 statements on their websites, and the South East LEP has released a formal **COVID-19 Statement** document. It explains SELEPs overall approach to the crisis and outlines how the LEP plans to help the region bounce back quickly.

Overall, however, it must be recognised that many local planning documents may quickly become obsolete as a result of the COVID-19 pandemic and the consequent economic outfall.



# Part 2a

## Challenges and Opportunities

# Current Challenges and Opportunities

## Current Carbon Emissions

**In 2018, the London to Sussex Coast Area's transport network emitted less carbon per capita than the South East overall.**

3,746k$TCO_2$ were emitted by transport in 2018 in the London to Sussex Coast Area, making up 45% of total carbon emissions. This is in line with other sub-regions in the South East. **Figure 2.1** provides a breakdown of transport carbon emissions per capita for each area of the South East.

35% of transport emissions are classed as minor road carbon emissions. This is higher than the South East average (28%), indicating lower coverage of major roads across the area, and different levels of transport demand along these roads.

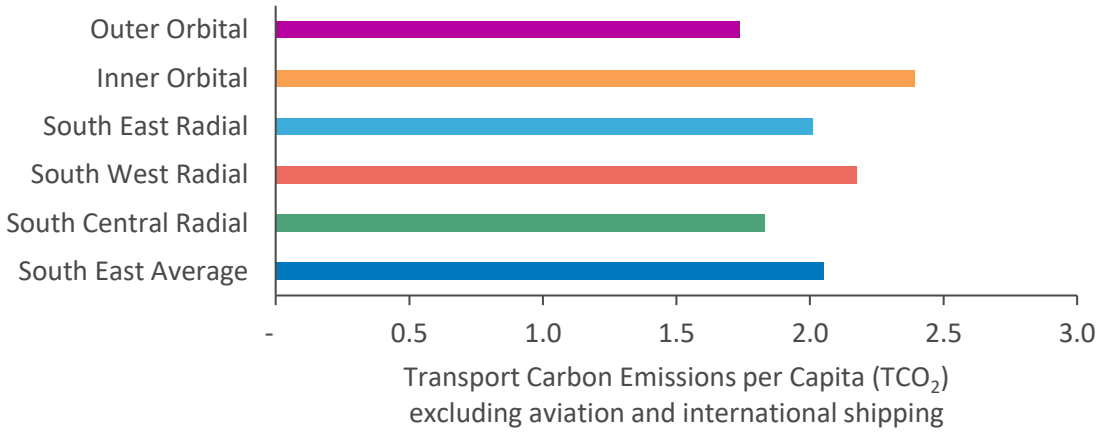
## Current Carbon Trajectory

**As Figure 3.2 shows, reaching a net zero carbon transport network by 2050 (yet alone 2030) will be very challenging.**

Carbon emissions from transport in the South East are declining, but not at a rate fast enough to reach net zero by 2050 or 2030.

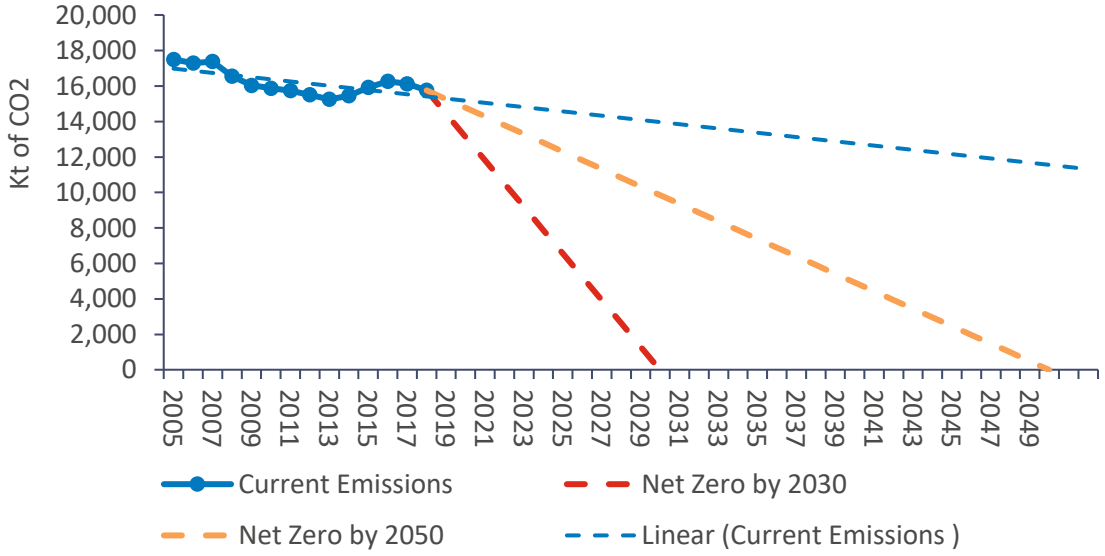
At the time of writing in March 2021, 17 of the 20 local authorities (upper and lower tier) in the London to Sussex Coast Area have declared Climate Emergencies and set targets to reach net-zero carbon emissions by 2050 (in some cases, much earlier).

**Figure 2.1: Surface Transport Carbon Emissions for the Transport for the TfSE area**




Source: BEIS (2018)

**Figure 3.2: Surface Transport Carbon Emissions Trajectory for the TfSE area**




Source: BEIS/DEFRA (2019)

## Housing Affordability

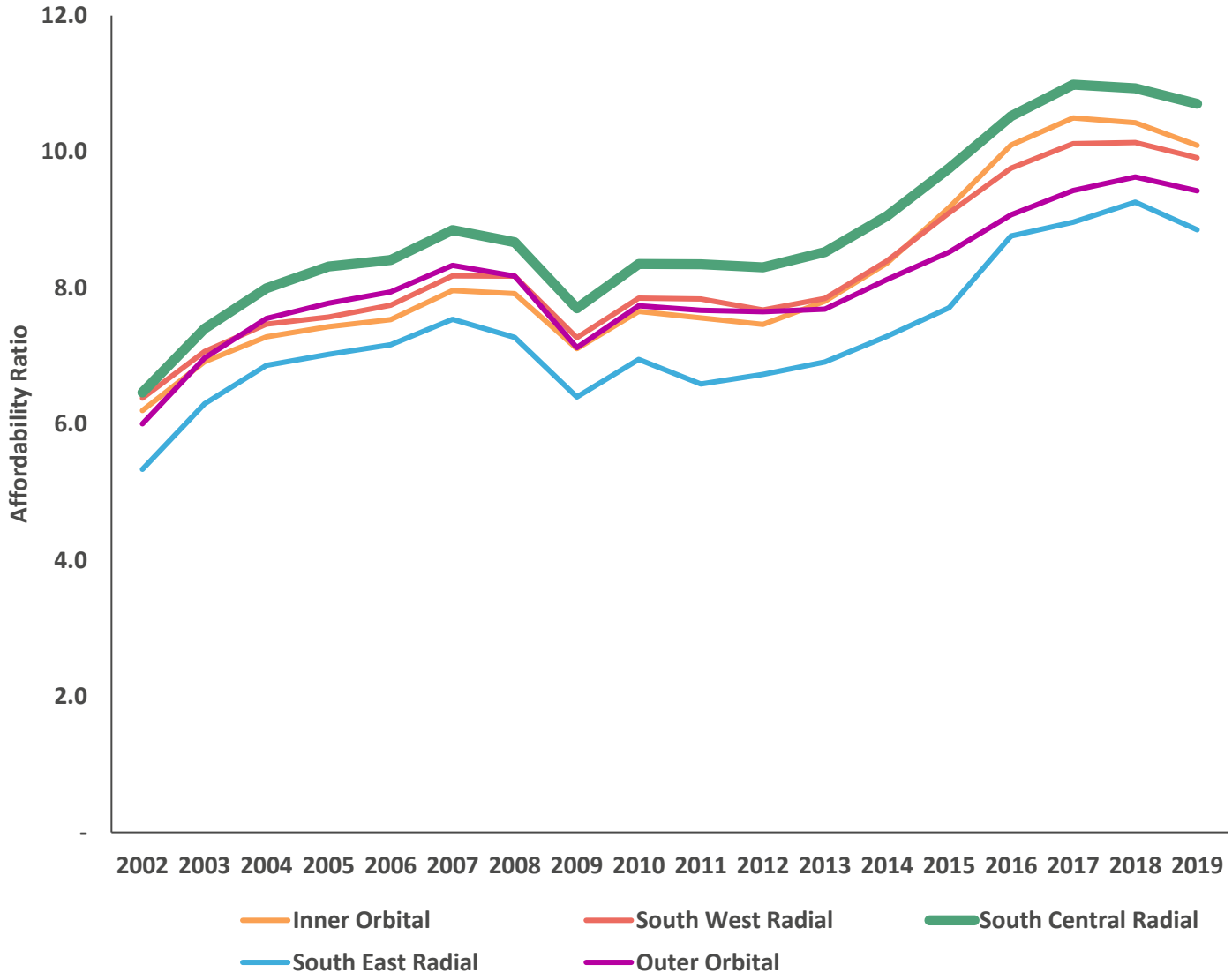
**In 2019, the average home in the London to Sussex Coast Area cost almost eleven times the average income in this area. This is the highest of the five sub-regions in the South East, where housing is 9.4 times as high as the average income.**

**Figure 3.3** shows the affordability ratio for each area in the South East from 2002 to 2019. This ratio has been growing for all areas in the past decade, indicating that housing is becoming more unaffordable.

In 2019, the least affordable housing in relation to earnings were in the areas closest to London, with the ratio in Mole Valley being in excess of 15:1, and Tandridge and Epsom and Ewell being in excess of 12:1. The ratio is also high in Brighton and Hove, in excess of 11:1.

In contrast, the most affordable housing is in Eastbourne, with a ratio of 8:1, however, prices here have still significantly increased over the past two decades.

**Figure 2.3: Housing Affordability ratio over time in the TfSE area**



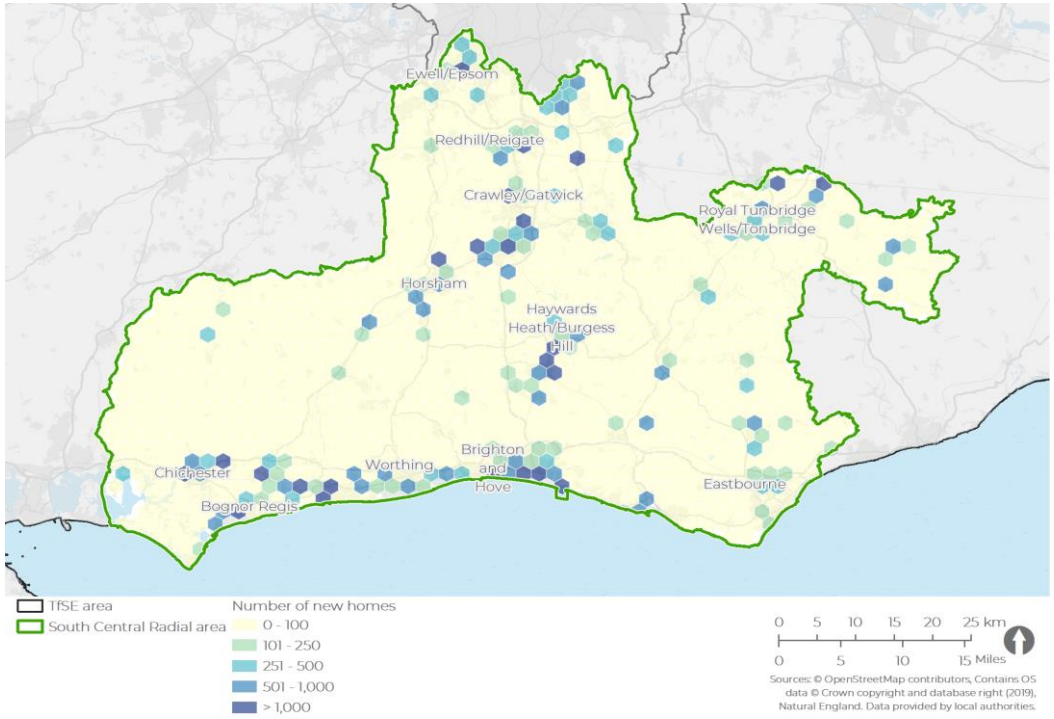

Source: ONS House Price Existing Dwellings to Residence Based Earnings Ratio (2019)

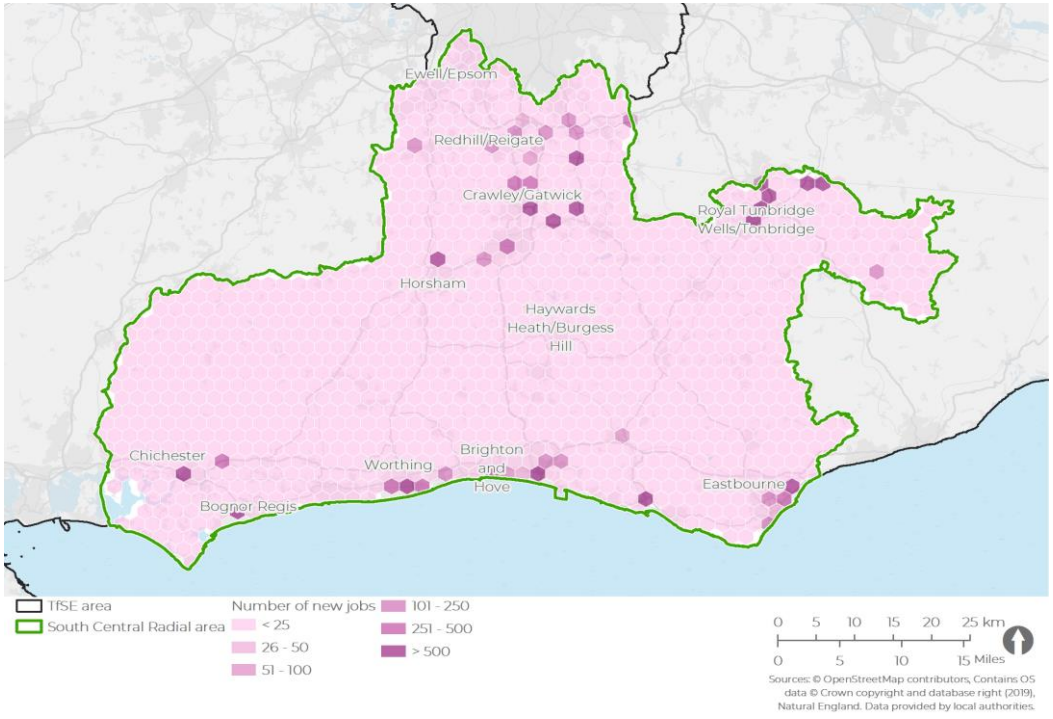
## Housing and Employment Growth

**There is a risk that future development patterns will generate significant imbalance in housing and employment growth in the London to Sussex Coast Area.**

**Figure 2.4** below shows the housing and employment growth planned for this area. The area is expected to accommodate significant housing growth, particularly in the Horsham, Haywards Heath, and Burgess Hill areas. The pattern of development and the apparent imbalance of housing growth versus job growth (the latter is expected to be more concentrated on the Sussex Coast and in the Gatwick Diamond area) is likely to drive higher demand for highway capacity. This in turn is expected to place pressure on parts of the highway network that already experience regular congestion. There is a risk that many of the congestion, safety, and air quality issues highlighted in the previous page could worsen if not action is not taken to mitigate these impacts.

**Figure 2.4: Housing allocations and employment growth forecasts in the London to Sussex Coast Area**



## Transport Network Resilience

**The London to Sussex Coast Area is served by a key rail and highway "spine" – the Brighton Main Line, and the M23/A23.**

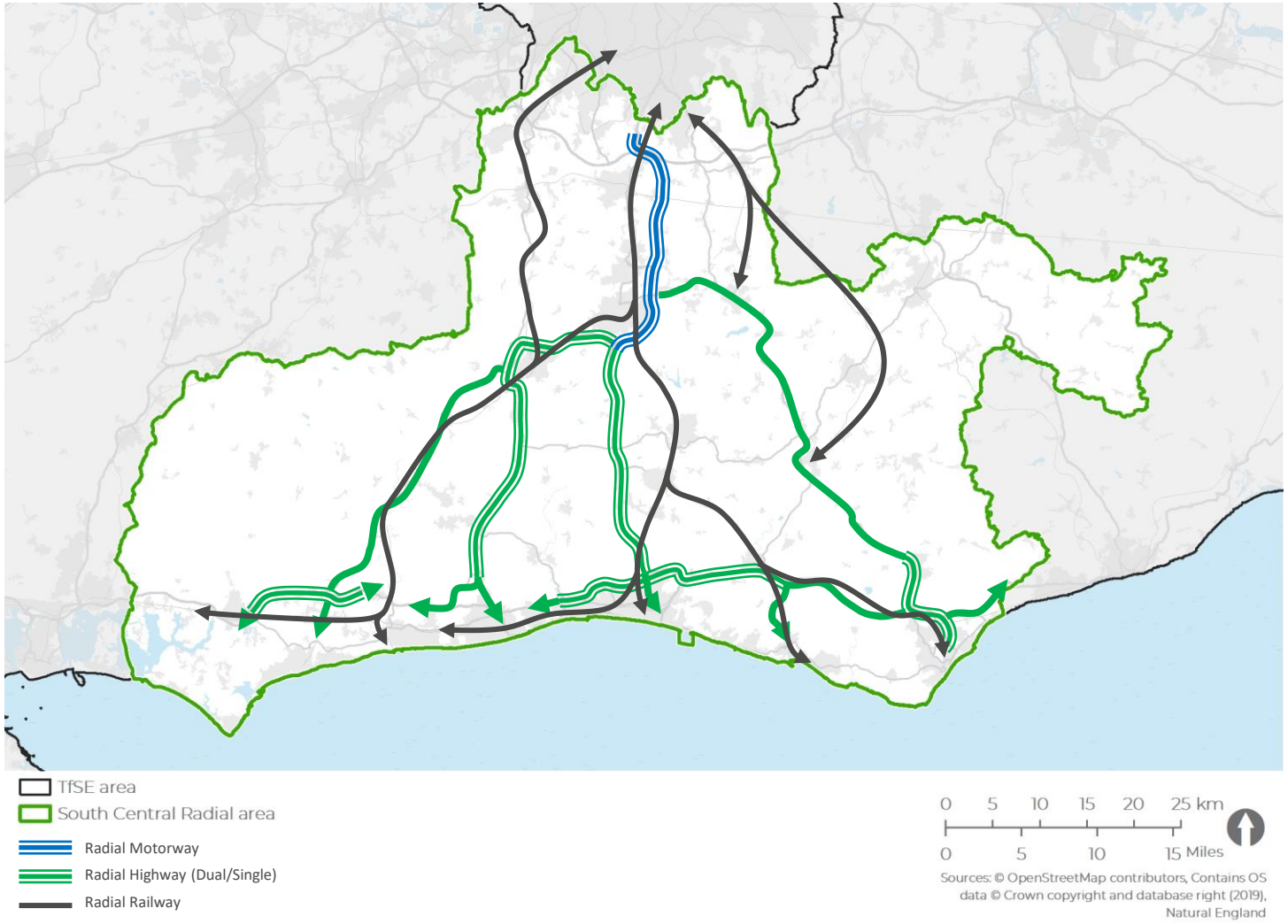
In contrast to other parts of the South East, the London to Sussex Coast Area is highly dependent on this single corridor. As **Figure 2.5** shows, the almost all radial rail routes and strategic highway routes merge at Crawley/Gatwick and continue north to London and the M25.

This means the area is vulnerable to significant disruption if there are any delays on this corridor.

The intensity of services on the Brighton Main Line means a small incident can have a significant impact on the wider network, especially if it occurs north of Gatwick.

Similarly, disruption on the M23/A23 can force traffic on to the A22 and A24, which are not well suited to heavy traffic.

**Figure 2.5: Radial routes in the London to Sussex Coast Area**



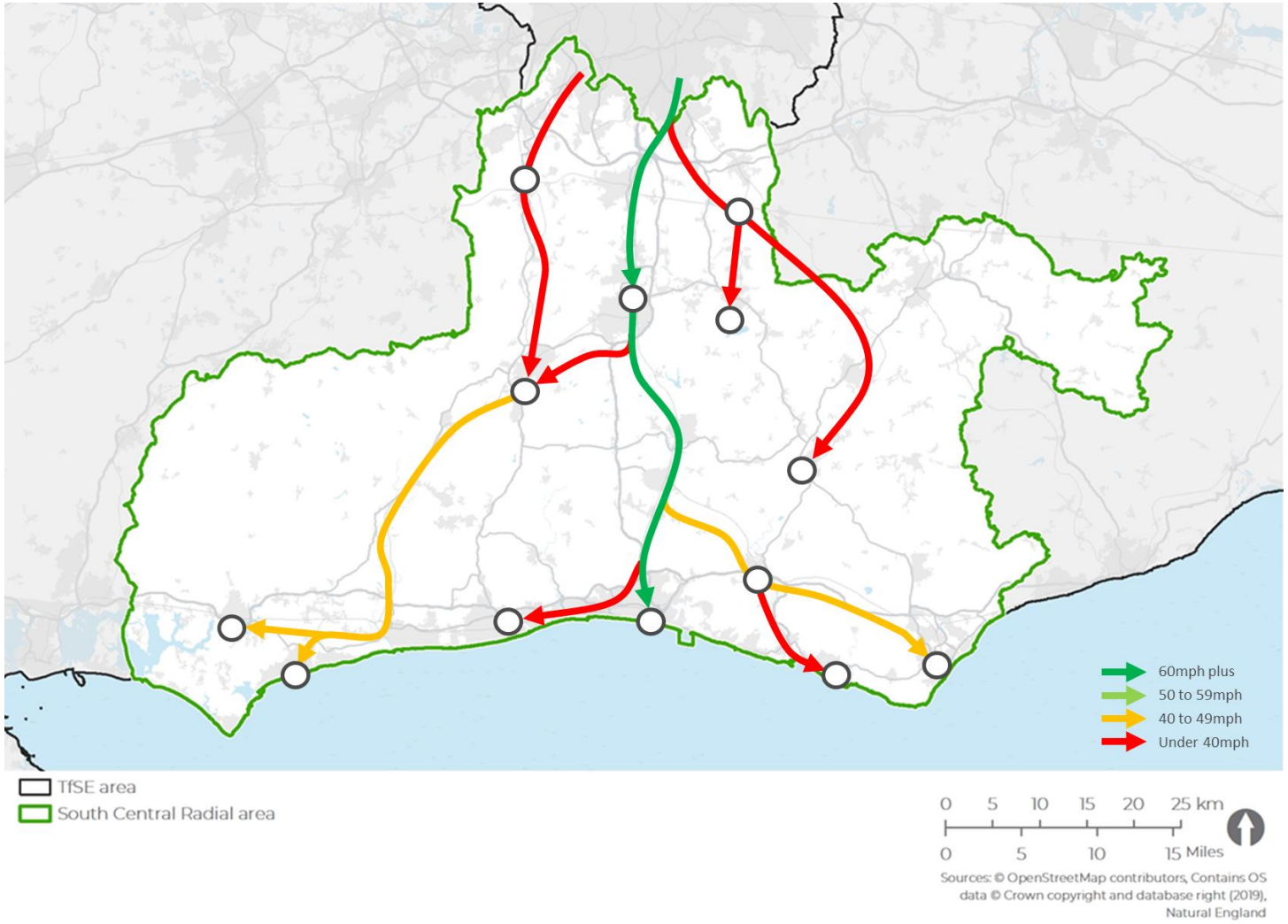
## Rail Connectivity

**The Brighton Main line forms the railway spine of the London to Sussex Coast Area. The level of service provided on the main line is generally very good, but connectivity is poorer for branch lines and other railways in the area.**

The Brighton Main Line supports fast and local services between London with Gatwick Airport, Crawley, Haywards Heath and Brighton. Many services continue to Eastbourne and Worthing via the East and West Coastway lines. Supporting radial railway lines in this area include the Mole Valley and Arun Valley line, which connect Dorking, Horsham, Chichester and Littlehampton to London. The Ukcfield Branch of the Oxted line is unelectrified and the line is mostly single track south of Hever.

**Figure 2.6** presents the average speed of rail journeys along rail corridors in the London to Sussex Coast Area and highlights the disparity in connectivity between the Brighton Main line and other railways. This disparity means some coastal communities need to "work harder" to secure investment and prosperity.

**Figure 2.6: Rail connectivity in the London to Sussex Coast Area**




Source: ONS House Price Existing Dwellings to Residence Based Earnings Ratio (2019)

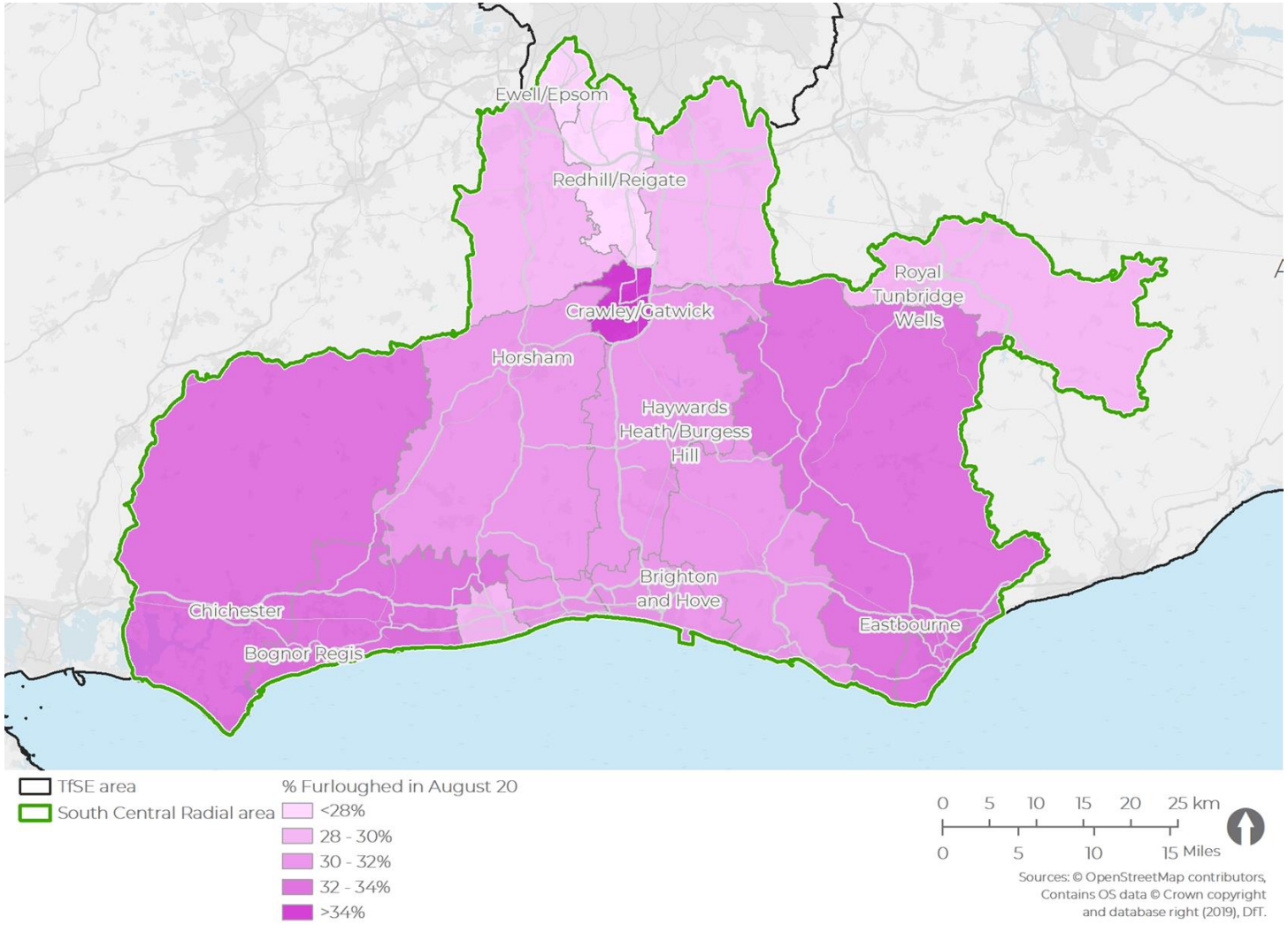
## COVID-19

**The COVID-19 pandemic has significantly dented immediate prospects for the aviation industry, which is concentrated in the Gatwick Diamond.**

**Figure 2.7** to the right shows the proportion of furloughed workers in the London to Sussex Coast Area. Furlough rates were particularly high in the Crawley/London to Sussex Coast Area, which is likely due to the high dependence of this area on the aviation industry, which has been particularly heavily impacted by the pandemic.

The post-pandemic economic impacts on the London to Sussex Coast area remain to be seen. There may be an emergence of a new pattern of working which will need to be considered. To ensure established employment space is used effectively, good public and active transport connections from peripheral locations to city centres are required. This will ensure these cities enjoy economic prosperity and improved quality of life.

**Figure 2.7: Radial routes in the London to Sussex Coast Area**



## Entrepreneurship

**The London to Sussex Coast Area is home to one of the best cities in the UK for entrepreneurs and start ups.**

In 2017 Brighton and Hove was identified as the 5th best place to start a small business in the UK, and in 2016 the same city was identified as the 4th best place for entrepreneurs (see **Figure 2.8**). London also scored highly in the latter study.

This is a significant strength for the London to Sussex Coast Area and an opportunity for the wider South East. It shows a path to creating a more diverse, high value economy for the area.

Developing the right environment for new businesses requires a multitude of ingredients including skills, capital, land, and innovation. The area's universities and highly educated labour force, along with its strong connections to London, are likely to be contributing to Brighton's strong performance.

**Figure 2.8: Top cities for entrepreneurs and start ups**



*Source: UCL School of Management (2016) https://www.mgmt.ucl.ac.uk/capital-of-entrepreneurs*
*Informi.co.uk (2017) https://informi.co.uk/blog/best-location-start-business-uk-might-surprise-you*

## Cycling

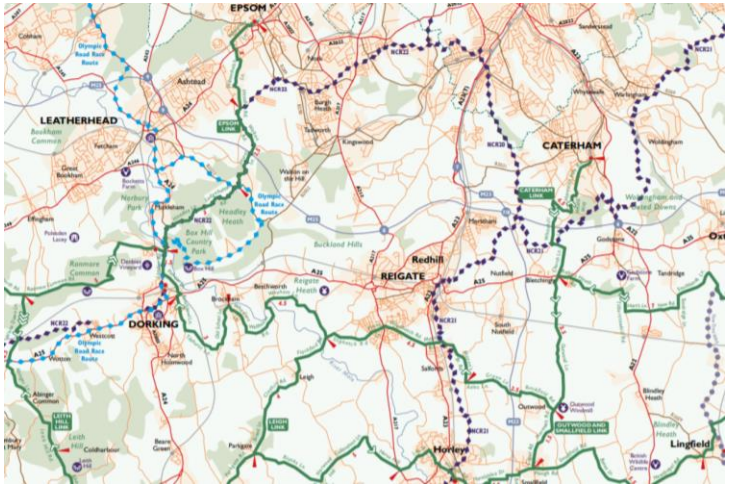
**The London to Sussex Coast Area is a popular area for leisure cycling. It is also the home a popular international cycleway, the Avenue Verte.**

While relatively few commuting journeys are undertaken by bike (see Problem Statement 9 on **page 85** in the Appendix), leisure cycling is popular. The London to Sussex Coast Area includes popular cycling attractions including Box Hill, Leith Hill, and Ditching (see **Figure 2.9**).

However, there are significant issues with safety and conflicts between cyclists and other road users at multiple locations in the area. Issues include infrastructure, lack of education/ road user training and enforcement

The popularity of cycling in this area should help make the case for investing in cycling infrastructure – including infrastructure that serves local journeys and supports shorter trips within the area.

**Figure 2.9: Popular Cycling Attractions and routes in the London to Sussex Coast Area**


*Source: Road Cycling UK* https://roadcyclinguk.com/sportive/ten-best-cycling-climbs-surrey.html
*Cycling Weekly* https://www.cyclingweekly.com/news/latest-news/exciting-plans-new-cycling-hub-cafe-leith-hill-446080
*Cycle Seahaven:* https://cycleseahaven.org.uk/review-of-the-avenue-verte/
*Surrey County Council (Surrey Cycle Routes):* https://www.surreycc.gov.uk/__data/assets/pdf_file/0007/132001/Surrey-Cycleway-Map-updated-July-2019.pdf

# Future Challenges and Opportunities

## Housing

**The London to Sussex Coast Area is expecting significant housing growth in the next local plan period (up to 2025).**

Future housing growth is expected to be concentrated around South Hampshire, West Sussex Coastal area, Burgess Hill/Hassocks, Ashford, and Thanet. While much of this growth will occur in peri-urban settings, it will be critical that developments are supported with active travel and public transport connections. This will ensure that individuals can travel sustainably to their places of work and residence without relying on private transport.

## Employment

**Employment growth within the area is expected to be more concentrated within the city centres of the larger urban areas, focussing on the major economic hubs of the "Gatwick Diamond" and Brighton and Hove.**

Many of the higher growth industrial sectors (e.g. low carbon technology and financial and professional services) are likely to be based within the city centres, as these industries favour urban environments.

## Risk of Imbalance

**There is a risk than an imbalance between housing and employment growth may generate unsustainable travel outcomes.**

There is a risk that concentrating housing developments in more rural areas, while employment is based within the urban area, may generate more demand by private vehicle. While housing is imperative, and to ensure housing that is both affordable and accessible is built, given the physical and environmental constraints of the area, some areas will be better placed to absorb housing than others.

## COVID-19

**COVID-19 has significantly altered established working patterns – but the long-term impact is not yet clear.**

The pandemic has highlighted the impact that new ways of working could have on travel demand. This may influence how established employment space is use, where people choose to live, and what this means for the development of transport services. Public transport will also need to adjust to lower revenues – at least in the short term.

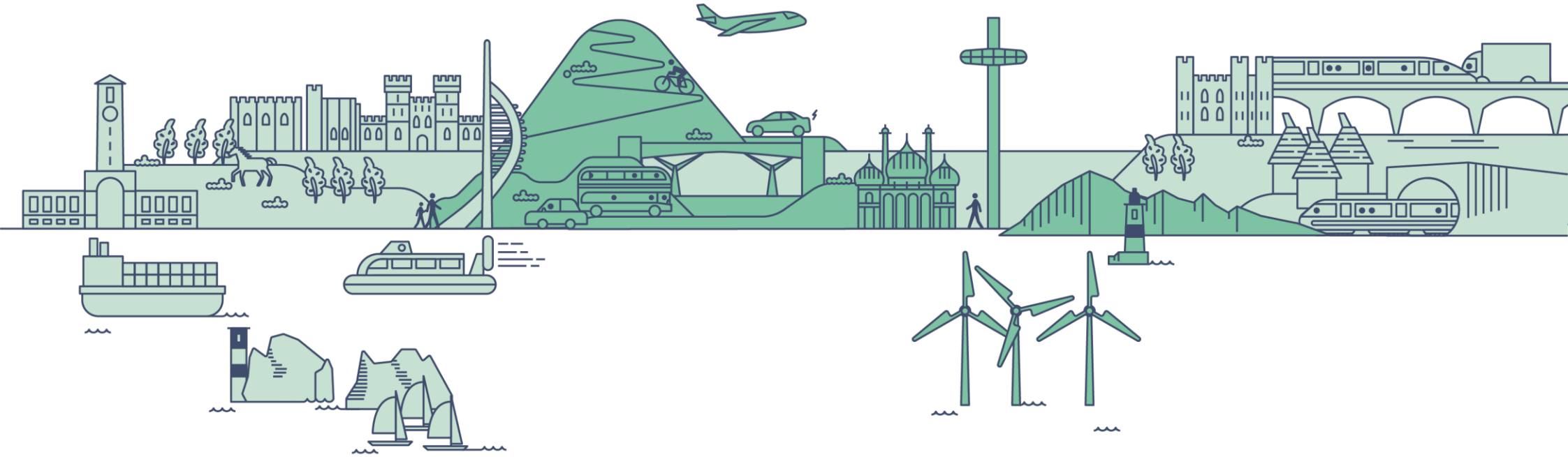
## Need for Intervention

**If no plans are made to address the issues in the London to Sussex Coast, then many socioeconomic challenges will likely persist.**

The current pipeline of highway and rail schemes being delivered through the Road Investment Scheme (RIS) and rail investment programmes should help address short-term capacity and connectivity charges.

However, in the longer term, the focus should shift away from adding highway capacity ('planning for vehicles') and instead focus on investing in public transport services ('planning for people') and promoting policies such as integrated land use and transport planning ('planning for places').

**This SPOC aims to provide a framework for managing the future challenges and leveraging the future opportunities summarised here. The following four pages present the Vision, Objectives, and Problem Statements for the London to Sussex Coast Area.**



# Part 2b

## Problem Statements

# Problem Statements

## Global Issues

1. Transport is not de-carbonising fast enough
2. Climate change threatens the resilience of the transport network
3. Freight is heavily reliant on the highway network, especially for first-mile-last-mile deliveries
4. There is a recognised need for housing and communities – but in the right places, supported by the right infrastructure, planned to deliver sustainable transport outcomes.

## Economy

5. The area's economy is not growing as fast as other areas of the South East, and appears to be too reliant on a small number of industrial sectors.

## Access

6. Rural communities are being left behind in digital, active travel, and public transport connectivity.
7. Too many transport services and networks are inaccessible to all users.

## Active Travel

8. There are significant gaps in regional, national, and international cycle networks in the area.
9. Active travel mode share is too low for many short journeys in the area.

## Public Transport

10. The Sussex Coastal conurbation – the 2nd largest conurbation in the South East – does not have the mass transit systems it needs (and deserves).
11. There are gaps in the quality of interurban public transport provision, particularly in rural areas.
12. Public transport information and ticketing arrangements are not sufficiently coordinated nor adequately integrated, particularly across transport modes.
13. For many people, public transport fares are too high and too complicated.

## Rail

14. Resilience is relatively poor on the Brighton Main Line – almost every passenger rail service passes through a single bottleneck at East Croydon
15. Spare capacity is limited on the Brighton Main Line and the allocation of this capacity does not meet the needs and/or aspirations of all the area's stakeholders
16. Connectivity is relatively poor for communities served by the Arun Valley Line, East Coastway Line, and Oxted Line (especially when compared to the Brighton Main Line).

## Highways

17. There are several congestion, road safety, and air quality "hot spots" in the area, particularly in Town Centres and at major junctions.
18. The area's major highways do not have enough capacity to accommodate planned housing (and potential airport) growth.

# 1 Transport is not de-carbonising fast enough

**While many stakeholders in the London to Sussex Coast Area recognise the need to decarbonise, this is not happening fast enough.**

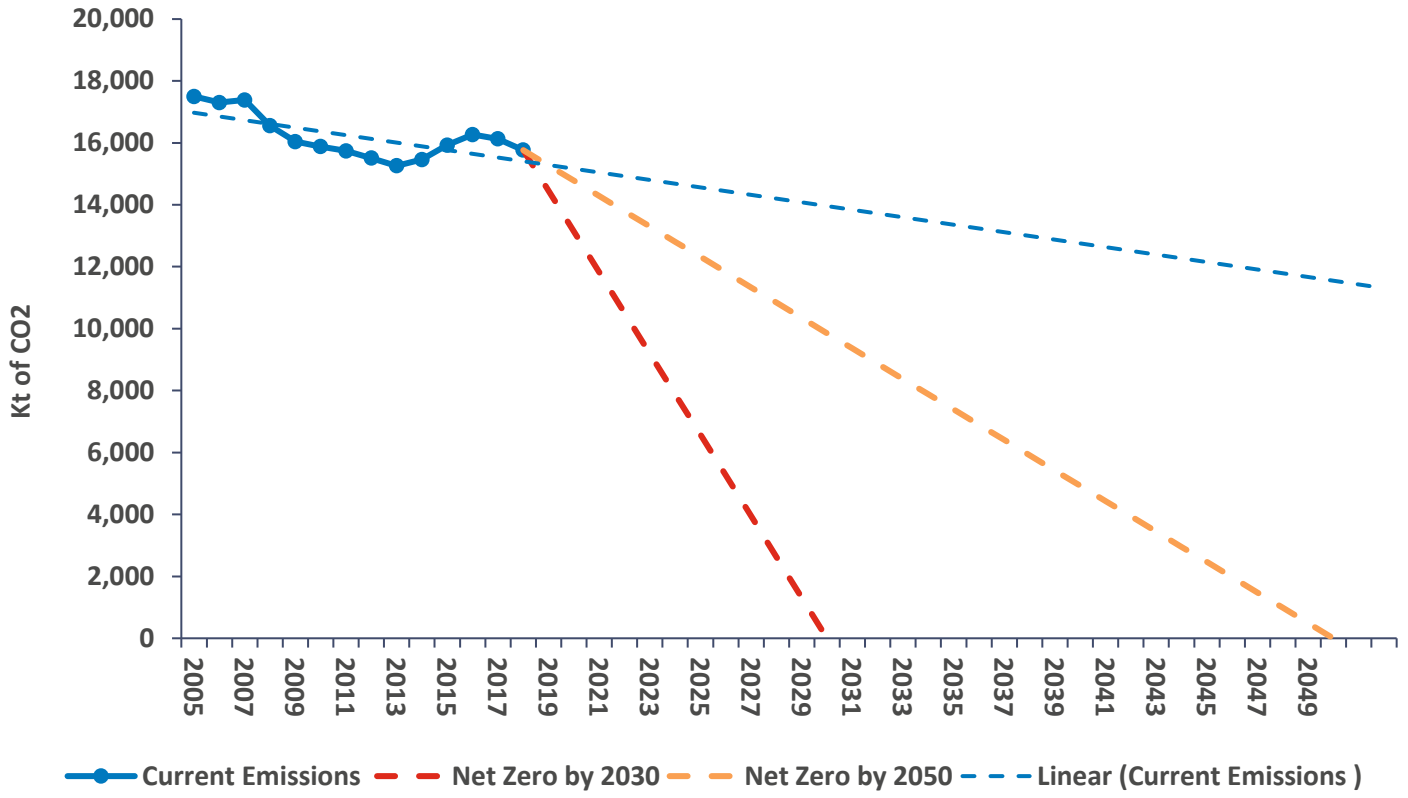
The trajectory shown in **Figure 2.10** indicates that the South East will not reach a position of net-zero carbon emissions by transport by 2050 – which is now a legal requirement supported by domestic legislation and international agreements (e.g. The Paris Agreement).

Several Local Transport Authorities in the South East have committed to more aggressive decarbonisation targets (e.g. reaching net-zero by 2030).

Electric vehicle take-up is low and there are some areas with very poor access to charging points. A step change in the electrification of highway transport and modal shift away from fossil fuel transport to electric/healthy transport is needed if the area is to reach its climate commitments.

The South East's rail network, while almost entirely electrified, includes some sections of diesel operations, which also contribute to this challenge.

**Figure 2.10: Surface Transport Carbon Emissions Trajectory for the TfSE area**




*Source: Steer analysis of BEIS data*

# 2 Climate change threatens the resilience of the transport network

**The transport networks serving the London to Sussex Coast Area are vulnerable to the effects of climate change and in many areas are showing signs of poor resilience.**

The South East's transport network cuts across several areas that are already vulnerable to flooding and temperature extremes. Some of these "funnel" significant flows over bridges and cuttings that do not have adequate diversionary routes (and creating better routes would be costly). For example, the A259 runs close to the coast in many places, and some sections of the M23 run through several flood plains. The South East's railway network is relatively old and features numerous tunnels and cuttings. See an example in **Figure 2.11**.

Climate change is likely to increase the frequency and strength of weather events (and extreme heat in summer). The outcome of this problem is increased operations, maintenance and renewal costs, which will be borne by transport users and wider society. Funding will be needed for this.

**Figure 2.11: Examples of climate change resilience challenges**


*Source: BBC*

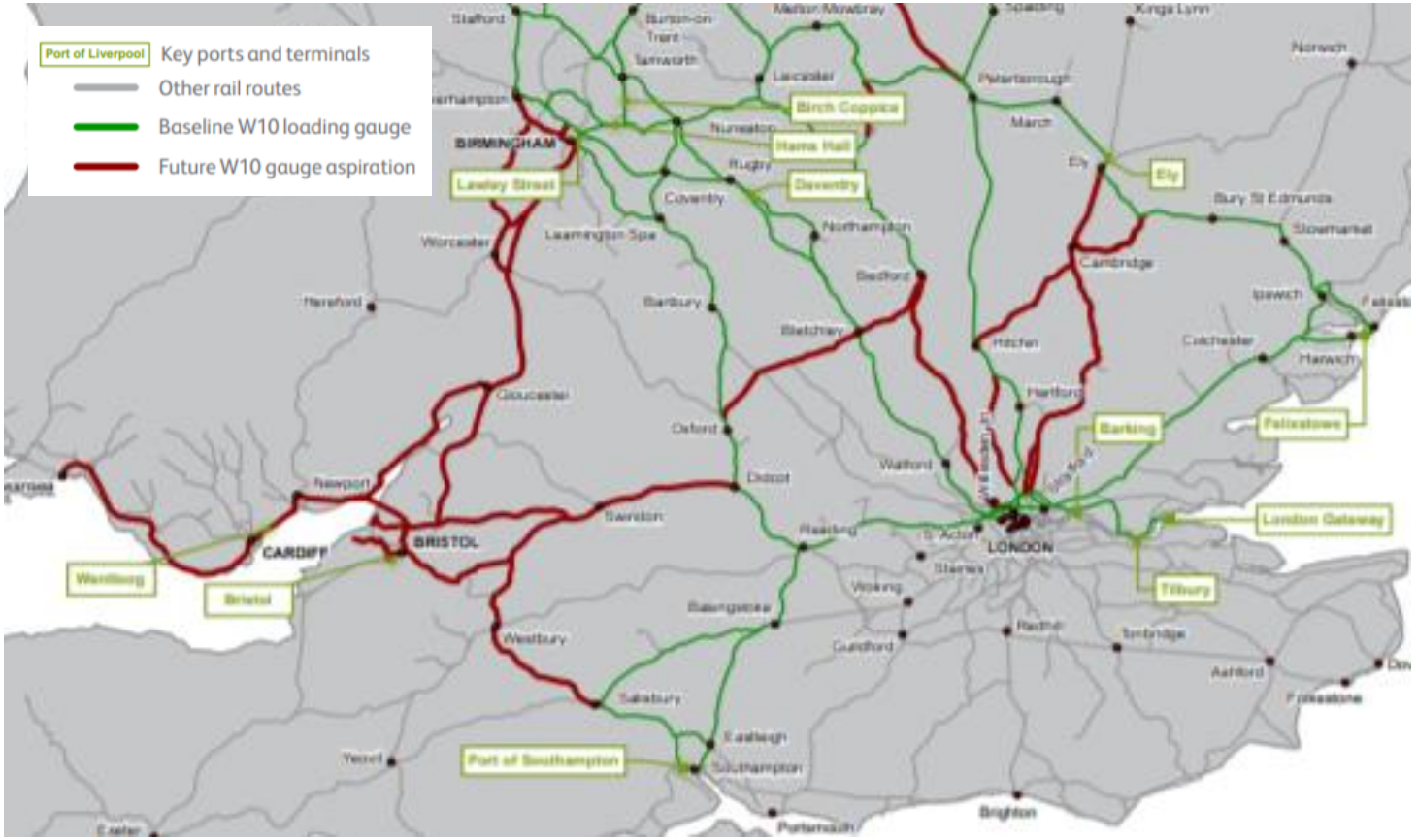
# 3 Freight is highly reliant on highways, especially for first-mile-last-mile deliveries

**Freight is very reliant on highways and rail freight is losing ground.**

Rail freight mode share is low nationally (around 5%, based on tonnage) and, according the ORR, data, has declined in terms of freight train movements on the national network. There is, however, some promising signs of recovery as rail freight grew in 2020. An electric rail freight sector should be well placed to provide a low carbon alternative – although it is recognised freight is in competition with passenger rail for timetable paths.

It should be possible to achieve higher mode shares. However, there are significant barriers to rail freight in the South East, particularly for routes to/from the Channel Ports. These barriers include a lack of freight terminals, poor access across London, high access charges on High Speed 1 and the Channel Tunnel. Inadequate gauge clearance also affects rail routes serving Dover (see **Figure 2.12**). Network Rail aspires to create a route between the Channel Ports and the Midlands to address this constraint.

## Figure 2.12: Rail Network Gauges




*Map source: Network Rail, freight Network Study, https://www.networkrail.co.uk/wp-content/uploads/2017/04/Freight-Network-Study-April-2017.pdf*
*Freight statistics source:* https://dataportal.orr.gov.uk/media/1738/freight-rail-usage-performance-2019-20-q4.pdf

# 4 There is a significant need for more housing – but it needs to be sustainable

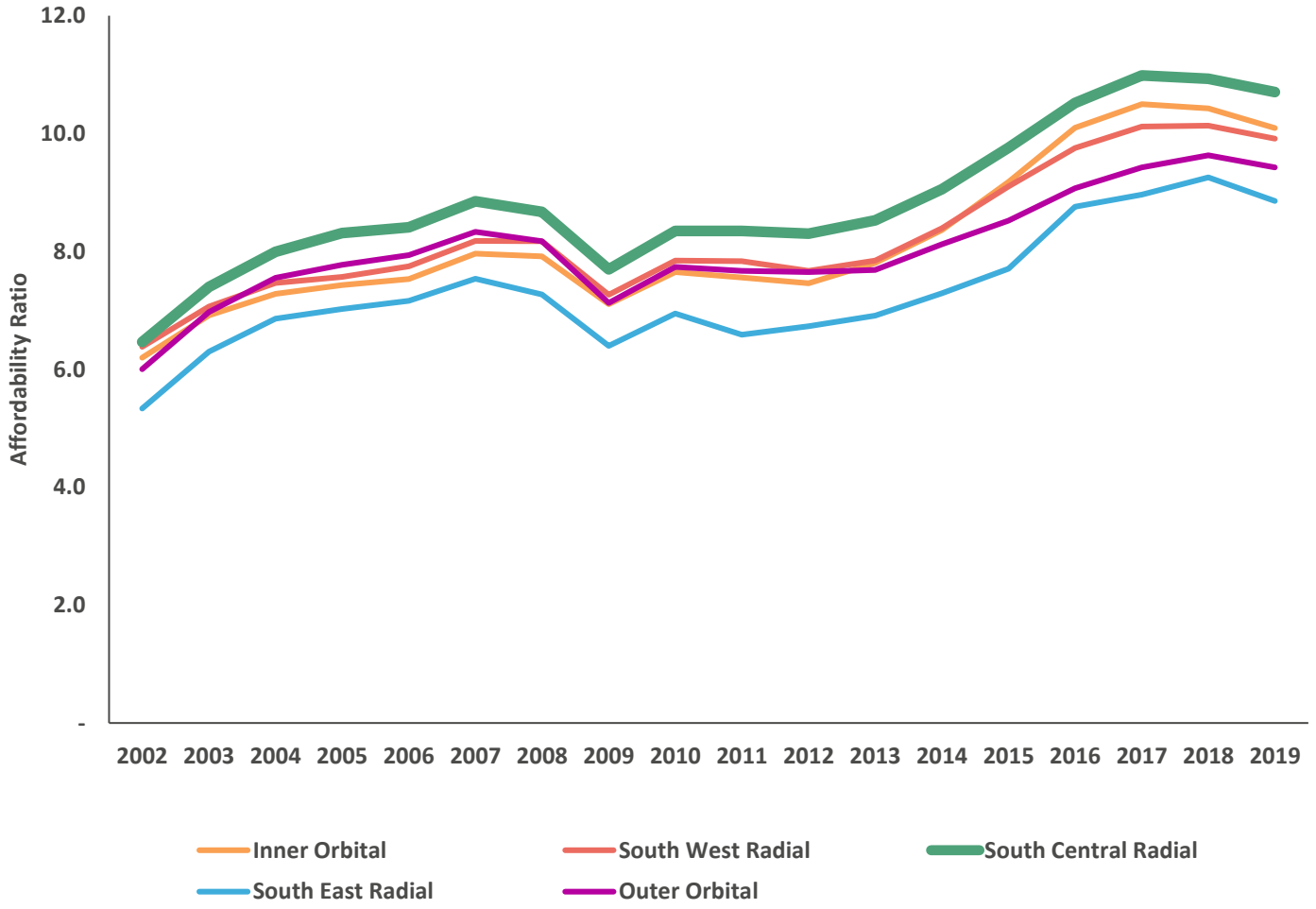
**There is a recognised need for housing and communities in the London to Sussex Coast Area – but in the right places, supported by the right infrastructure, and planned to deliver sustainable travel outcomes.**

The fragmented nature of the planning system and lack of effective strategic planning makes it difficult to integrate spatial, transport, and economic planning. The area is also heavily constrained by the landscape and layout of urban areas.

To accommodate a possible 360,000 new residents (see **Figure 2.4** of this report) there will be a need for additional housing and employment – and this is planned. Recent discussions with government suggest this figure may grow, albeit with more of a focus on delivery in urban areas.

There is risk that housing growth will result in unsustainable transport patterns as many housing developments are being delivered, some distance away from shops, town/city centres, commercial services, public services, employment sites, and transport hubs.

**Figure 2.13: Affordability of housing in the London to Sussex Coast Area (from Figure 3.3)**



# 5 The area's economy is too reliant on a small number of industrial sectors

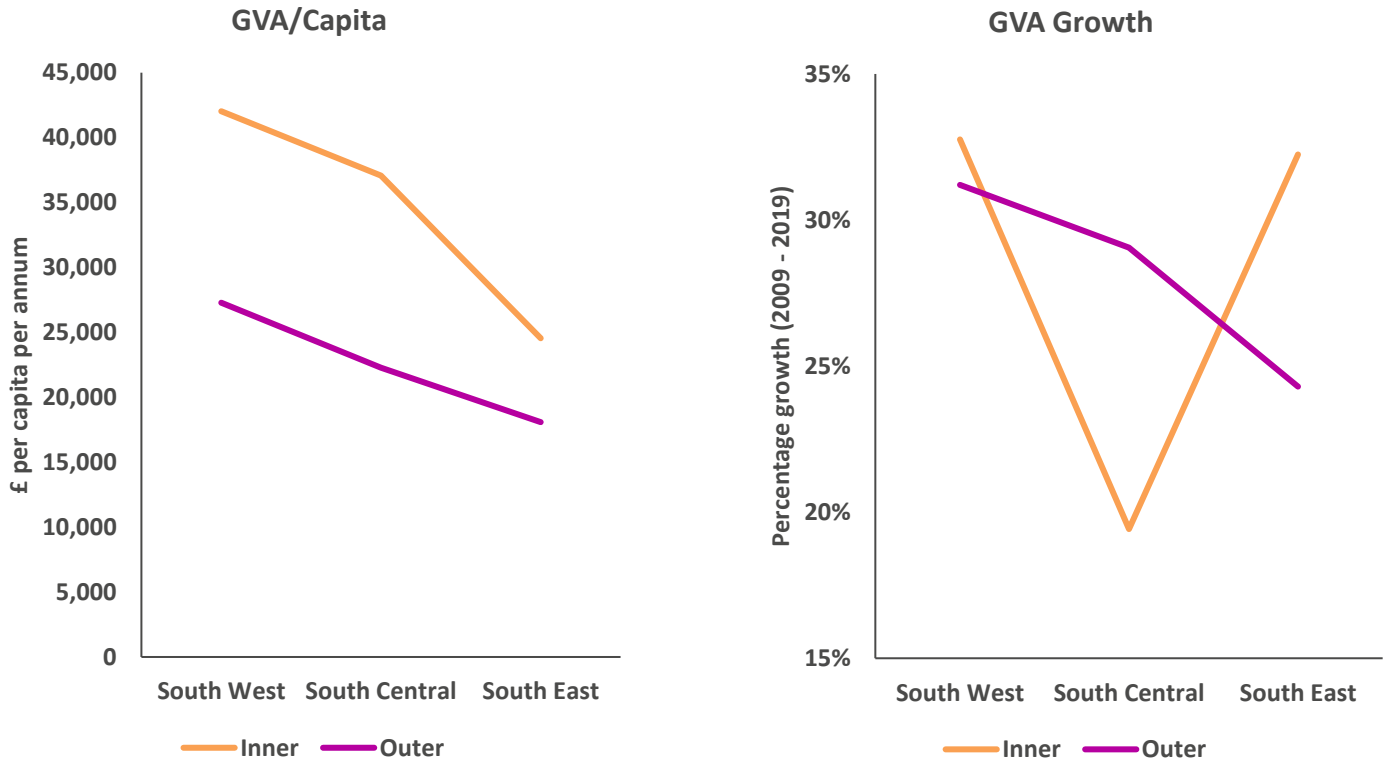
**The area's economy is not growing as fast as other areas of the South East and appears to rely too much on a small number of industries.**

In 2018, TfSE identified industrial sectors that were deemed to be high value, high growth industries. Employment by each key sector in the London to Sussex Coast Area is listed in **Table 1.1 in the Evidence Base Report**. This data identified a high reliance on the Financial Services and Aviation industries. Respectively, 91% and 90% of total jobs in the South East in these sectors are in the London to Sussex Coast Area.

The COVID-19 pandemic has highlighted the risks of relying on a particular industry. The challenges facing the aviation industry are well document. **Figure 2.9 in the Evidence Base Report** highlights the portion of the workforce in the Gatwick Diamond area that participated in the furlough scheme as a result of pandemic travel restrictions.

Furthermore, there are concerns about productivity and growth gaps in the area. The data presented in **Figure 2.14** to the right highlights relatively low GVA growth in the area, particularly in the north.

**Figure 2.14: Varying socioeconomic outcomes in different parts of the TfSE area**




*Source: ONS (2008 and 2018)*

# 6 Rural communities are being left behind in digital, active, and public transport connectivity

**Rural communities in the London to Sussex Coast Area have significantly poorer access to public transport, shared mobility providers, and high-speed broadband compared to urban areas.**

This means it will be harder for rural communities to:

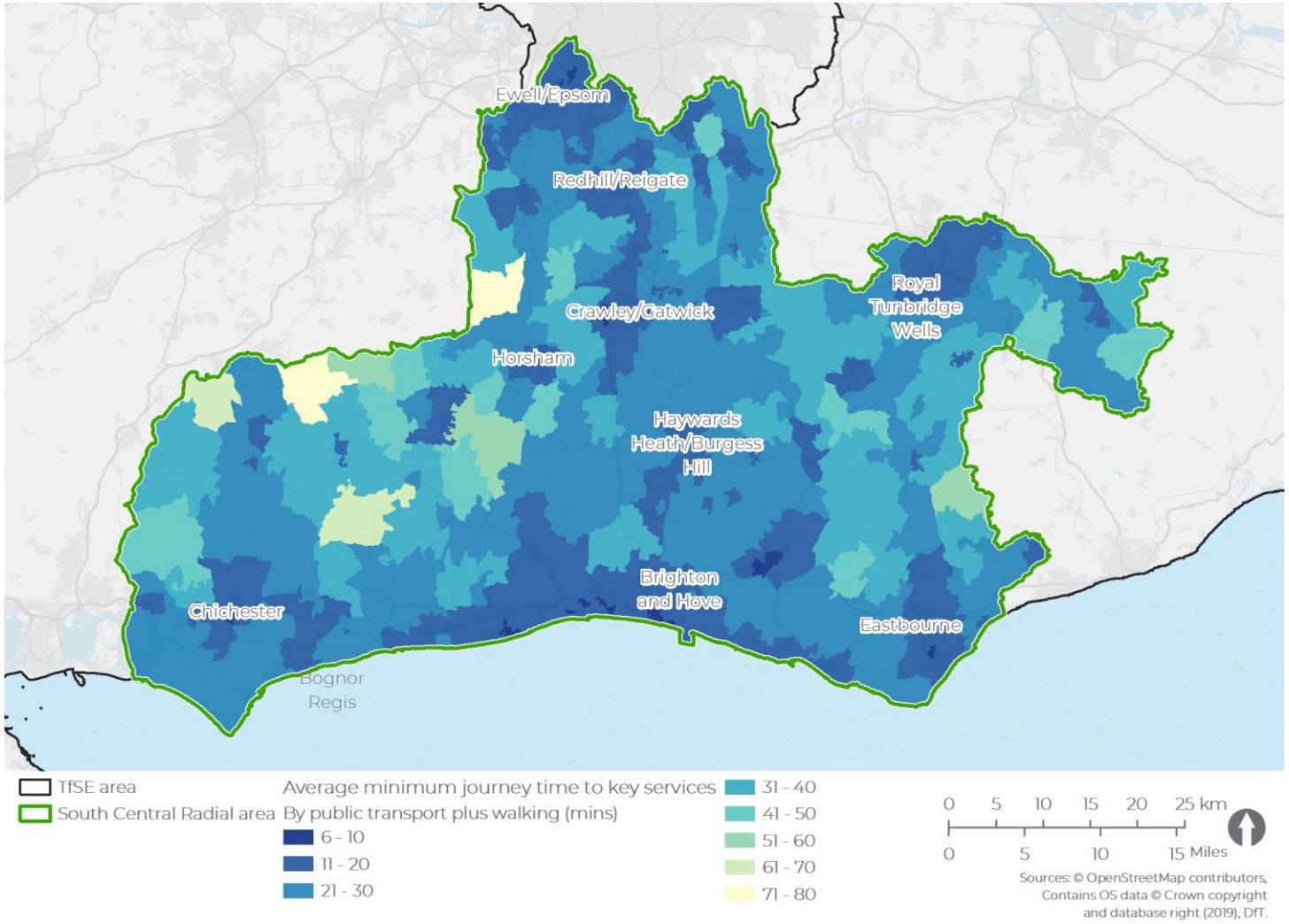
- access key services (see **Figure 2.15**);
- work remotely;
- access services remotely;
- access public transport networks; and
- access emerging shared mobility, demand responsive, and Mobility as a Service transport services;
- attract businesses that rely on technology and/or public transport.

This promotes a high reliance on private motoring in rural communities.

While many rural areas are prosperous, there are pockets of high level deprivation in some rural parts of the London to Sussex Coast Area.

There is also a risk that inequality in access to broadband will result in wider inequality in socioeconomic outcomes.

**Figure 2.15: Public Transport connectivity**



# 7 Too many transport services and networks are inaccessible to all users

**While there has been good progress in improving accessibility in recent years, significant issues remain.**

Accessibility – in the broadest terms – is a key barrier to many users. The Williams Rail Review identified this is a key challenge for the rail industry.

The DfT's "Access for all" programme has unlocked some investment in some rail stations. However, as Figure 2.16 to the right shows, there is a need for more progress.

Other examples where improvements should be considered include:

- Improving the accessibility of bus fleets and rail rolling stock;
- Making it easier to plan, buy, and use public transport services;
- Improving access to public transport for passengers with hearing, vision, and/or cognitive needs;
- Improving walking and cycling facilities (many people with additional needs rely on cycles as their primary form of mobility); and
- Making public spaces (e.g. town centres) more accessible.

**Figure 2.16: Accessibility at train stations (% stations offering fully accessible provision at January 2019)**

| | Accessible ticket machines | Accessible ticket office | Train ramp access | National Key toilets | Step free access | Mobility set down |
|---|---|---|---|---|---|---|
| **Great Britain** | **53%** | **21%** | **73%** | **18%** | **61%** | **28%** |
| East of England | 80% | 17% | 73% | **33%** | 72% | 23% |
| East Midlands | 39% | 17% | 41% | 20% | 77% | 16% |
| London | 87% | **33%** | 60% | 24% | **44%** | 24% |
| North East | 24% | 13% | 98% | 13% | **84%** | 47% |
| North West | **16%** | 18% | 96% | 8% | 63% | 17% |
| South East | **89%** | 24% | 79% | 32% | 56% | 46% |
| South West | 51% | 15% | 74% | 22% | 57% | **60%** |
| West Midlands | 37% | 16% | 82% | 25% | 67% | 33% |
| Yorkshire and the Humber | 24% | **8%** | **99%** | 8% | 67% | 34% |
| Scotland | 40% | 27% | **35%** | **4%** | 51% | **10%** |
| Wales | 37% | 18% | 94% | 10% | 79% | 17% |

**Key** — **Lowest proportion of stations** / **Highest proportion of stations**

Data from National Rail Enquiries, Knowledgebase XML API, accessed 24 January 2019

*Source: House of Commons Library (2019) https://commonslibrary.parliament.uk/how-accessible-are-britains-railway-stations/*

# 8 There are significant gaps in regional, national, and international cycle networks in the area

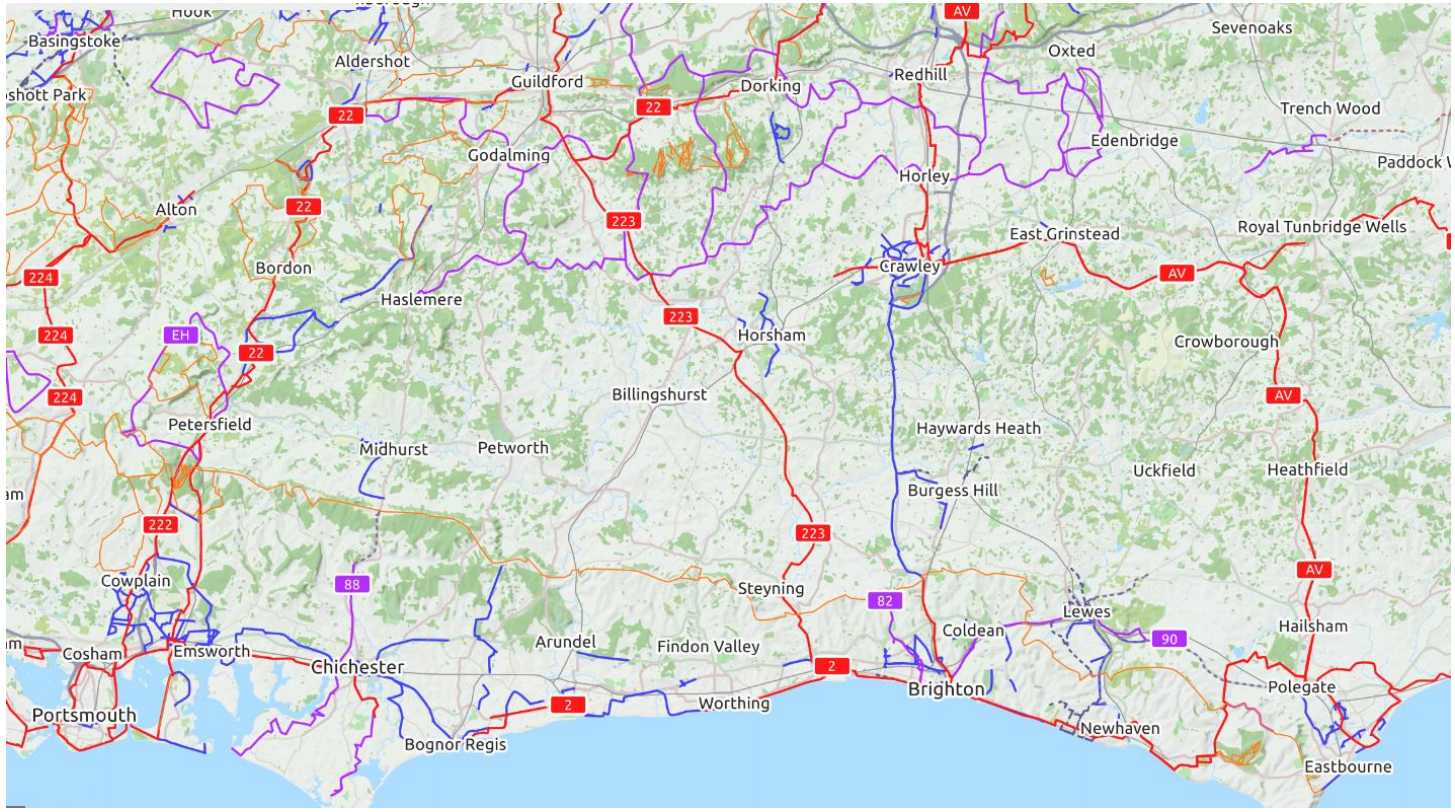
**The existing cycle network is not at a consistent standard does not support wider cycling participation, and there are strategic gaps in the parts of the area's cycle network (see Figure 2.17).**

Sustrans were recently forced to downgrade sections of the National Cycle Network (NCN) in this area (e.g. between Crawley and Brighton) due to the deteriorating safety risk on cycling corridors in these areas.

TfSE analysis has shown a lower proportion of residents in the South East live close to the NCN than residents in neighbouring regions. This is a metric that many stakeholders wish to see improve.

The London to Sussex Coast Area is a popular area for leisure cycling. Several London 2012 cycling events were held at the northern end of the corridor, and similar events such as Ride London have been held in the area in the past. The area is also home to the international cycleway "Avenue Verte", which follows a long route and is supported by variable quality infrastructure (e.g. significant sections are unpaved and/or unlit).

**Figure 2.17: Cycle networks in the London to Sussex Coast Area**




*Source: Openstreetmap (2021)*

# 9 Active travel mode share is too low for many short journeys in the area

**Active travel is low in the London to Sussex Coast Area, especially for shorter trips and journeys to work.**

**Figure 2.18**, which was published in TfSE's Transport Strategy for the South East in 2021, shows low (and variable) levels of cycling participation across the South East. Cycling participation is especially low in Horsham, Mid Sussex, and Tandridge districts. The TfSE strategy also presents data showing that fewer than 1 in 5 residents cycle once or more a week. Travel To Work data also shows cycling has a low mode share, particularly outside Brighton and Hove.

Every Local Transport Authority on this corridor wants to see a step change in cycling participation in their areas, but the infrastructure is not available to support this ambition. Furthermore, cycling infrastructure is seen as an enabler for new technologies such as electric bikes/scooters. A lack of infrastructure could be holding the region back from the opportunities these technologies offer.

**Figure 2.18: Cycle participation and national/international cycle routes in the South East**

# 10 Public transit systems to do not meet all the needs of the area's largest conurbation

**The Sussex Coastal conurbation – the 2nd largest conurbation in the South East – does not have the mass transit systems it needs to thrive.**

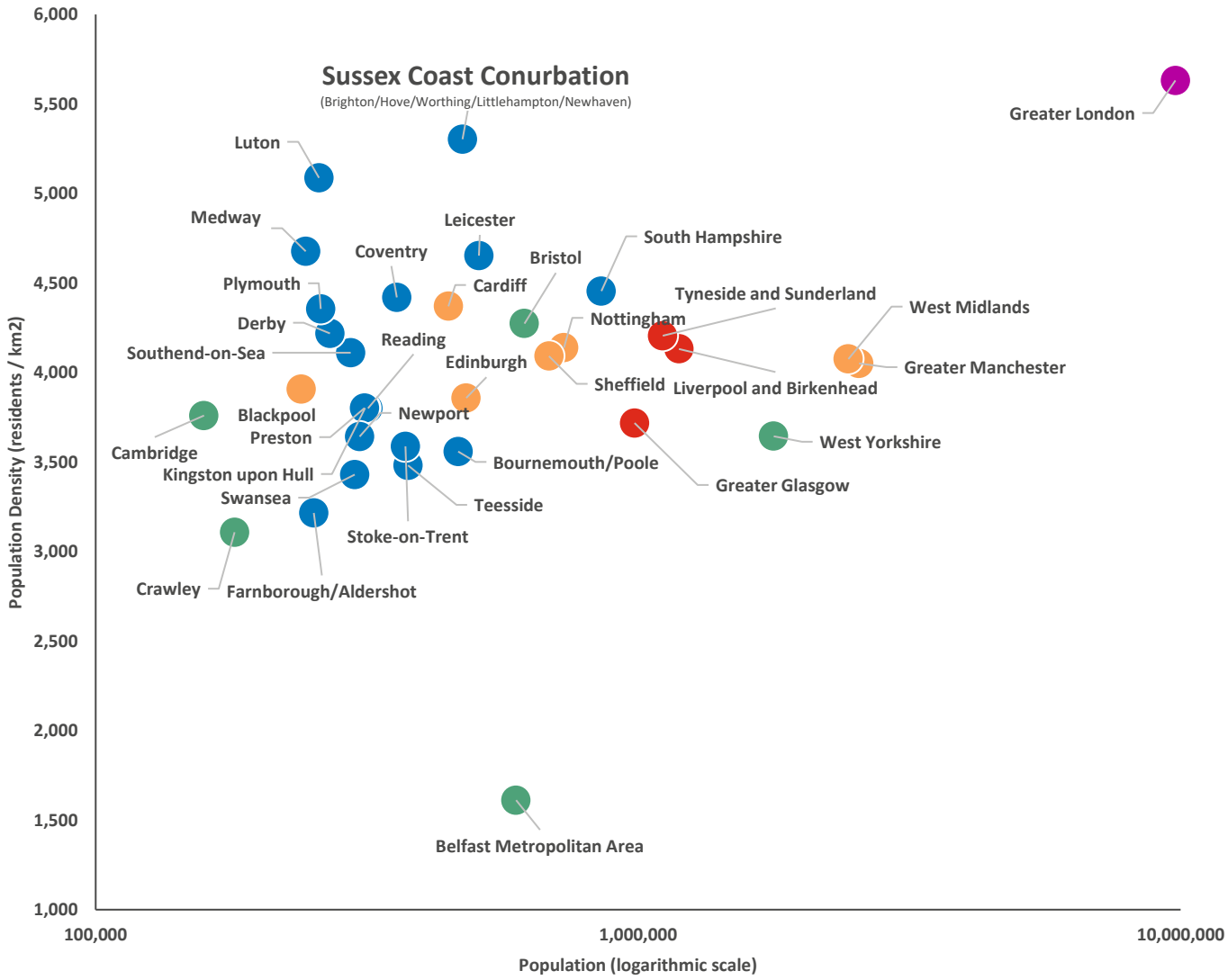
**Figure 2.19** shows that there are conurbations nationally with lower population and density – key variables for successful transit – that do have mass transit systems.

While the Brighton/Hove/Worthing/Littlehampton/Newhaven ("Sussex Coast") built up area is served by a good bus network, it is not served by a mass transit system such as Light Rail Transit or Bus Rapid Transit.

This means the conurbation relies on conventional buses, which deliver slower journeys than alternative systems, and suburban rail services, which are relatively infrequent, are not available to all, and do not adequately serve commercial centres.

Residents in these conurbations do not benefit from the accessibility, connectivity, and quality of mobility that is available in other cities. This forces residents and business to rely on the car and/or relatively slow (i.e. <8mph average speed) bus service, which undermines the competitiveness of the area's largest cities and the quality of life of its residents.

## Figure 2.19: Mass transit systems in major conurbations in the UK



# 11 There are gaps in the quality of interurban public transport provision, notably in rural areas

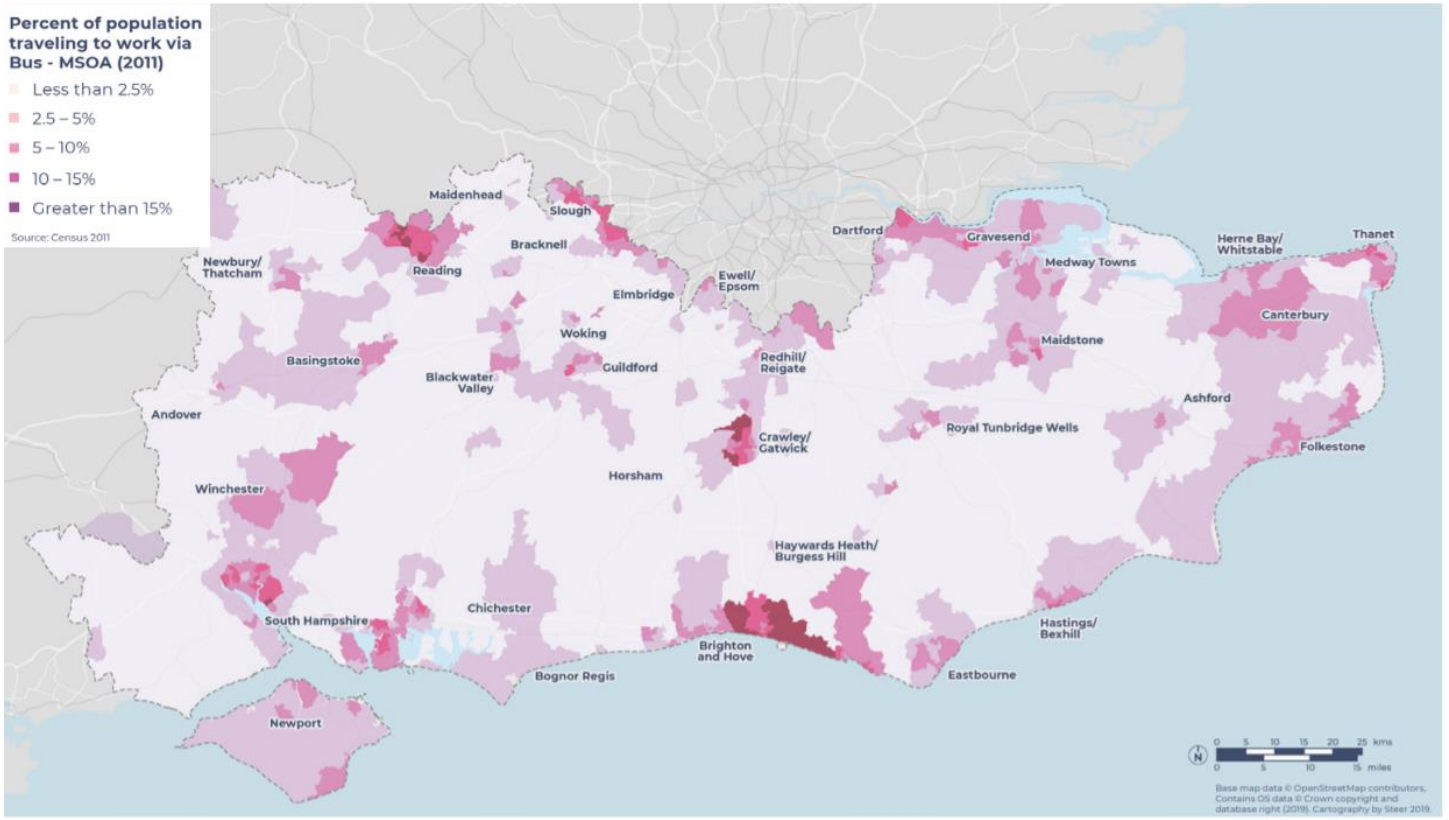
**Bus patronage is low and (other than in Brighton and Hove) is declining.**

**Figure 2.20** shows the percentage of the population travelling to work by bus at the time of the 2011 census. **Figure 1.21 from the Evidence Base Report** shows recent trends in bus patronage. In East Sussex, Kent, and Surrey, bus use declined by more than 10% over the period 2009/10 – 2019/20. In contrast, bus use in Brighton and Hove has increased by 19% over the same period (bus patronage has broadly been stable in West Sussex over this period).

This evidence points to a bus industry that – outside Brighton and Hove – serves few Travel To Work journeys and is in decline. Bus patronage is particularly low in rural areas as well as in fast growing Major Economic Hubs such as Burgess Hill/Haywards Heath and Horsham.

The Fastway network in Crawley and Brighton and Hove bus network point towards the opportunity for bus in the London to Sussex Coast Area.

## Figure 2.20: Bus share of Travel To Work flows



# 12 Public transport information and ticketing are not sufficiently coordinated nor integrated

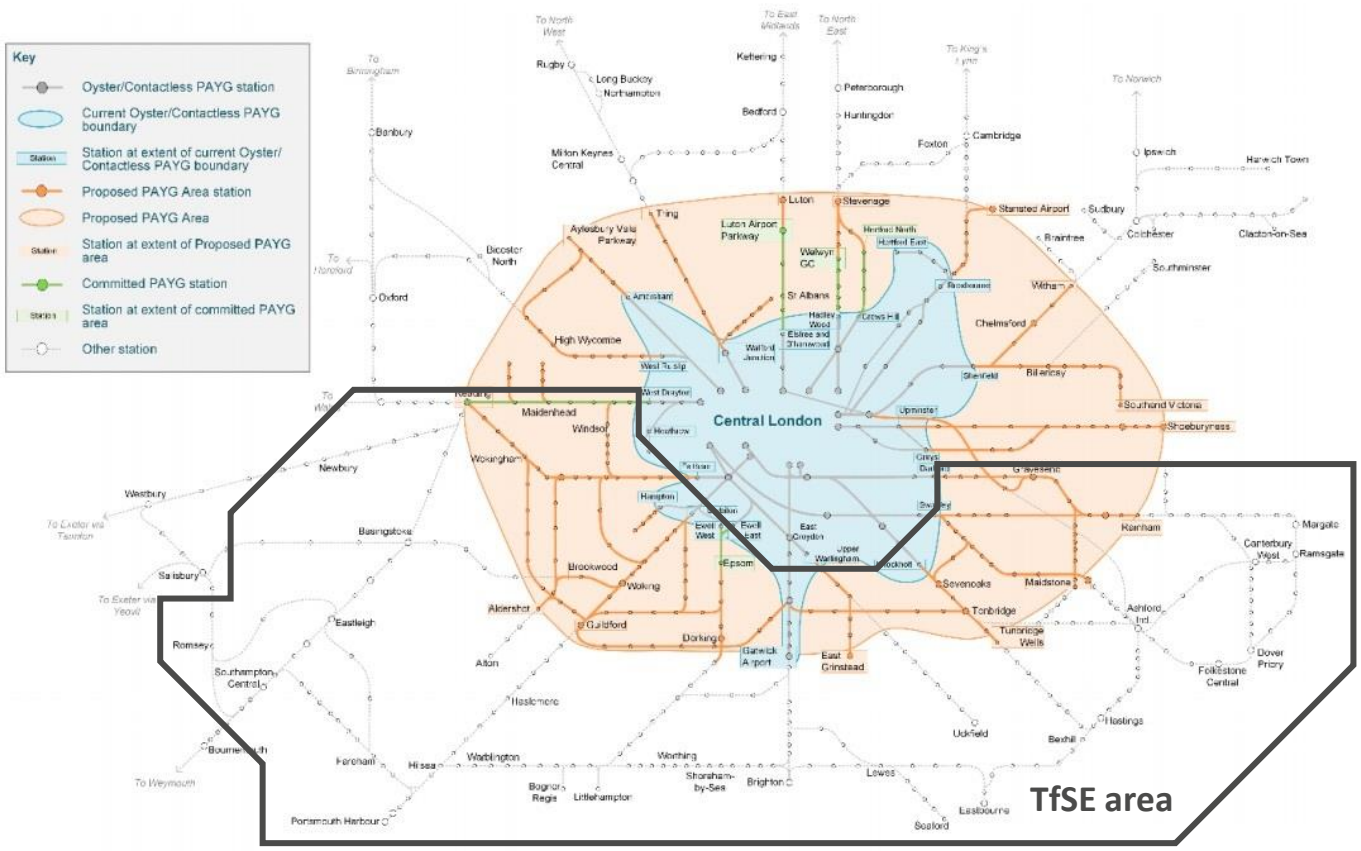
**Public transport information and ticketing arrangements are not sufficiently coordinated nor adequately integrated, particularly across transport modes.**

Parts of the South East are included in the London Travelcard area (see **Figure 2.21**) and are included in Transport for London's contactless travel arrangements. However, outside the London area, there are few examples of:

- Integrated journey planning tools;
- Integrated, multi-modal fares (noting some areas have access to PlusBus);
- Zonal fares systems (e.g. centered on large towns and cities south of Gatwick and Sussex Coast conurbations); and
- Integrated, multi-modal payment systems.

All the above makes it harder to plan, pay for, and complete multi-modal journeys in the South East. None of the conurbations in the South East are currently served by dedicated multimodal planning apps – although this is a fast-developing area of interest and third parties may provide a solution soon.

**Figure 2.21: Extent of London Pay-As-You-Go payment systems in South East England**




*Source: Department for Transport "Pay-as-you-go on rail" consultation (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/776998/payg-rail-consultation-doc.pdf*

# 13 For many people, public transport fares are too high and too complicated

**Stakeholders have cited the price of rail tickets and the complexity of ticketing as a disincentive to travelling by public transport.**

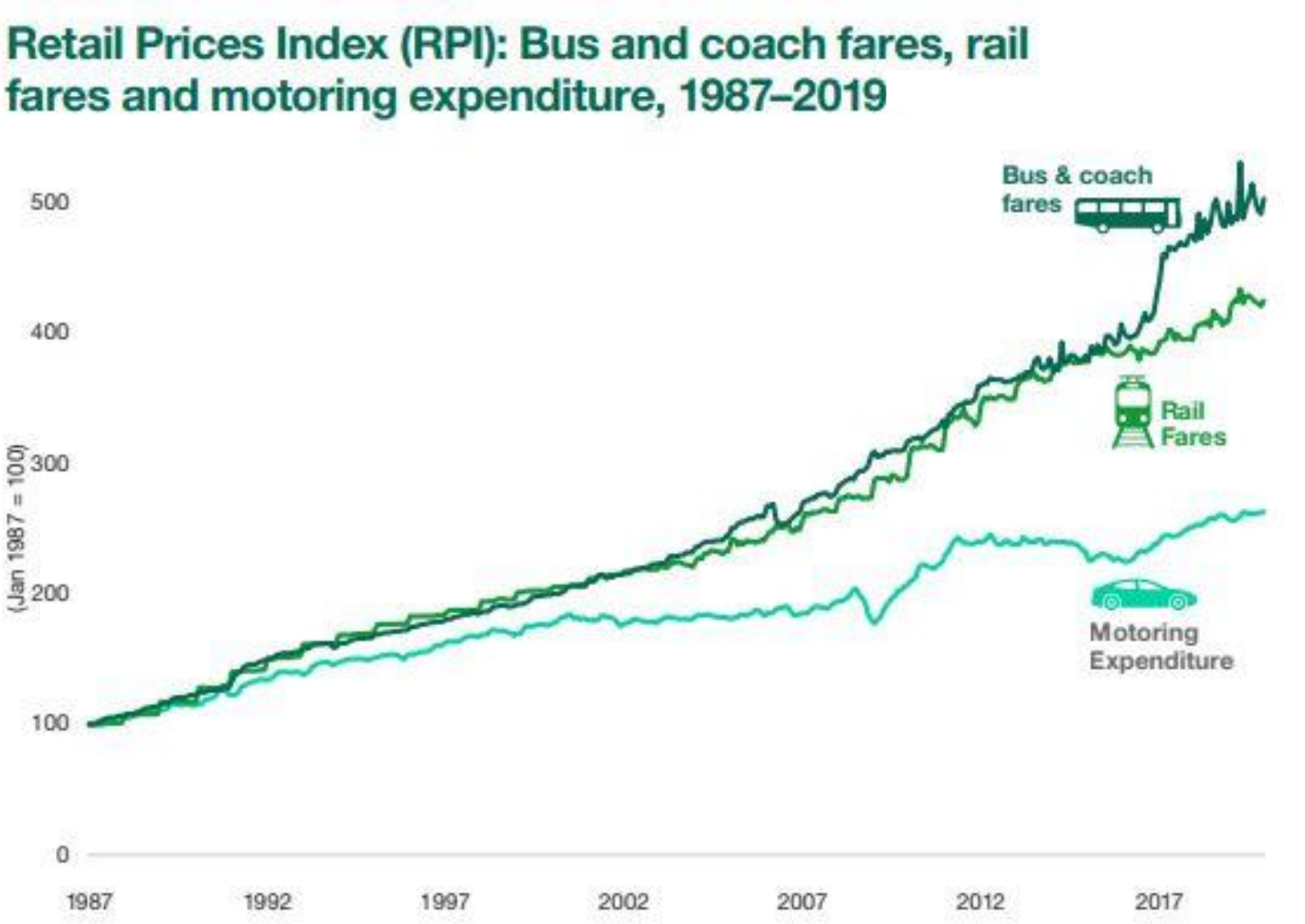
As **Figure 2.22** shows, this perception is rooted in evidence showing rail fares have indeed become more expensive than motoring in real teams. The means it is harder to persuade people to change from the car to rail.

While Season Tickets offer better value for money (if they are used in full), headline figures of £6k+ annual season tickets is off-putting to many and may disincentivise people from moving to the South East.

The complexity of the tickets offered also puts people off using the railway. As an example: a myriad of different fares are offered between Gatwick and London. The Williams Rail Review has identified the complexity of fares as an issue.

It is acknowledged that this is a complex topic and there are examples of low fares available during off peak periods, particularly on longer distance journeys (which do not make up a significant portion of journeys in the South East).

**Figure 2.22: Real terms increase in costs of public transport and motoring**




*Source: DfT, "Bus Back Better" (2021)*
*https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/969205/DfT-Bus-Back-Better-national-bus-strategy-for-England.pdf*

# 14 Resilience is relatively poor on the Brighton Main Line

**Almost every passenger rail service passes through a single bottleneck at East Croydon.**

According to Network Rail, the Croydon area is the busiest, most congested and most complex part of the country's rail network.

The lack of capacity at East Croydon station and the complex series of junctions north of Croydon – the Selhurst triangle – delays trains across the Brighton Main Line and the wider network every time an incident occurs.

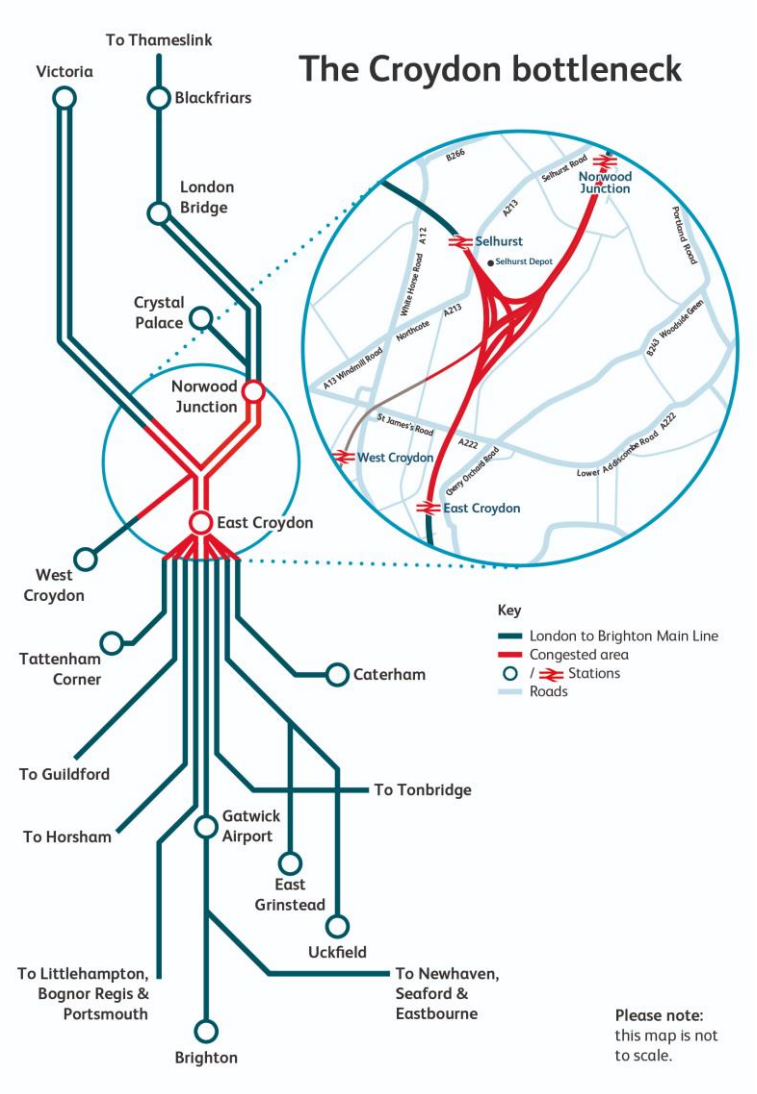
It also means there is no capacity to run more trains to meet future passenger growth, which will lead to overcrowding in the years ahead unless action is taken.

The key bottlenecks shown in **Figure 2.23** include East Croydon Station (which only has six platforms), Windmill Bridge (which only allows five tracks), and the Selhurst Triangle (which includes flat crossings).

There are also resilience challenges further down the Brighton Mainline, notably for sections where tracks reduce from four to two and around Gatwick Airport.

## Figure 2.23: The Croydon Bottleneck

*The images presented above (also from Network Rail) illustrate proposals to address many of the issues highlighted in this Problem Statement.*




*Source: Network Rail*

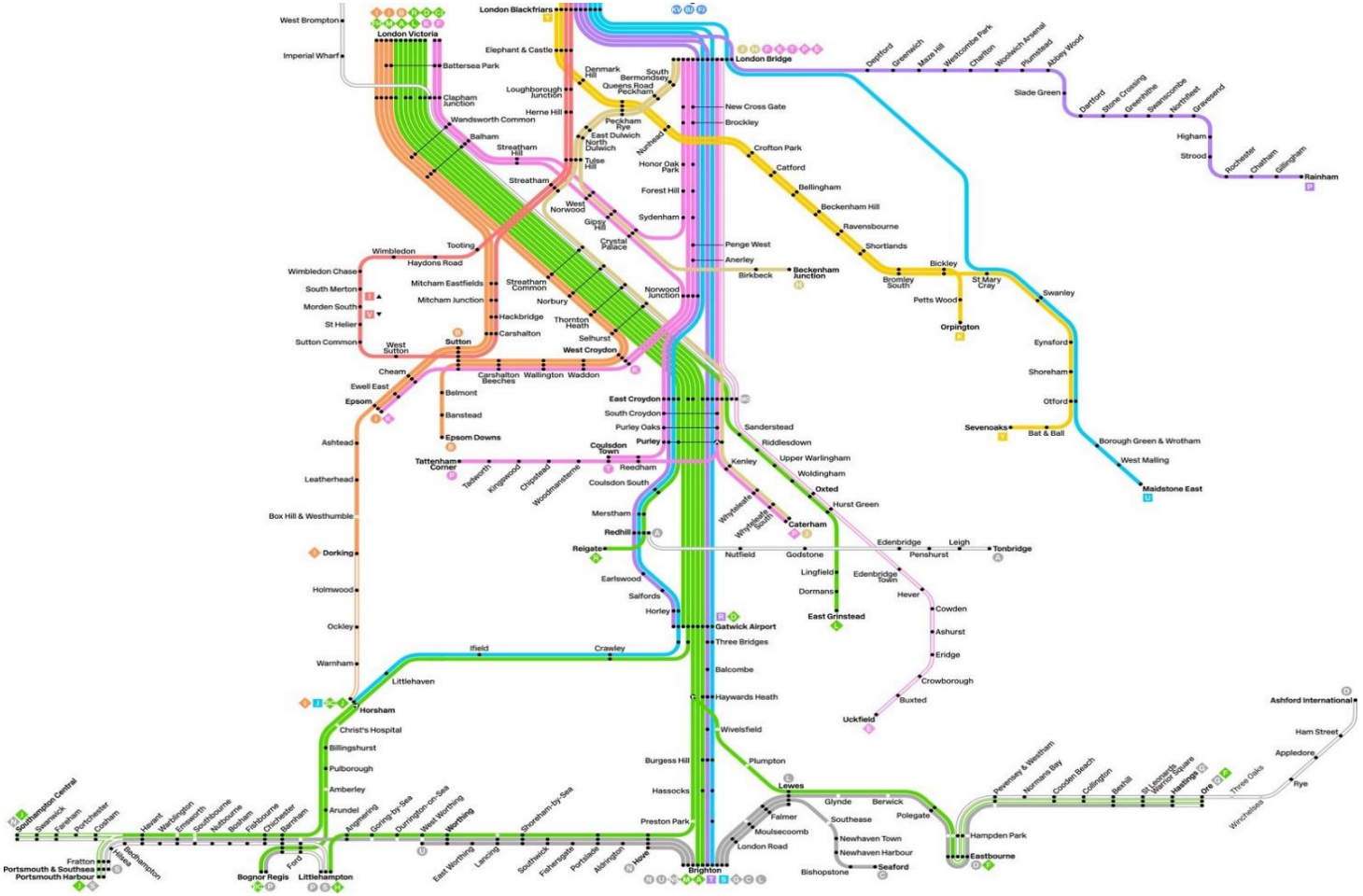
# 15 Spare capacity is limited on the Brighton Main Line

**Capacity is limited on the Brighton Mail Line, and the allocation of this capacity does not meet the needs and/or aspirations of all the area's stakeholders.**

The railway timetable is designed around constraints on the Brighton Main Line to ensure that services operating from locations such as Littlehampton and Brighton to London (and beyond) are timed to accommodate capacity bottlenecks closer to London. The rest of the timetable has to "fit around" whatever is left over from this capacity allocation process. **Figure 2.24** illustrates the challenges planners face in balancing radial and orbital journeys on the Brighton Main Line.

In recent years, several "paths" (e.g. "slots") that used to support cross country services (e.g. Portsmouth/Brighton – Reading/Midlands/North) have been reassigned to radial services. This has slowly eroded the South Coast's connectivity to the rest of the UK.

**Figure 2.24: Thameslink, Southern and Great Northern franchise services**




*Source: Project Mapping* [http://www.projectmapping.co.uk/Reviews/Resources/TSGN%20Travelling%20Wolf.jpg](http://www.projectmapping.co.uk/Reviews/Resources/TSGN%20Travelling%20Wolf.jpg)

# 16 Rail connectivity is relatively poor off the Brighton Main Line

**Connectivity is relatively poor for communities served by the Arun Valley, Coastway, and Oxted lines.**

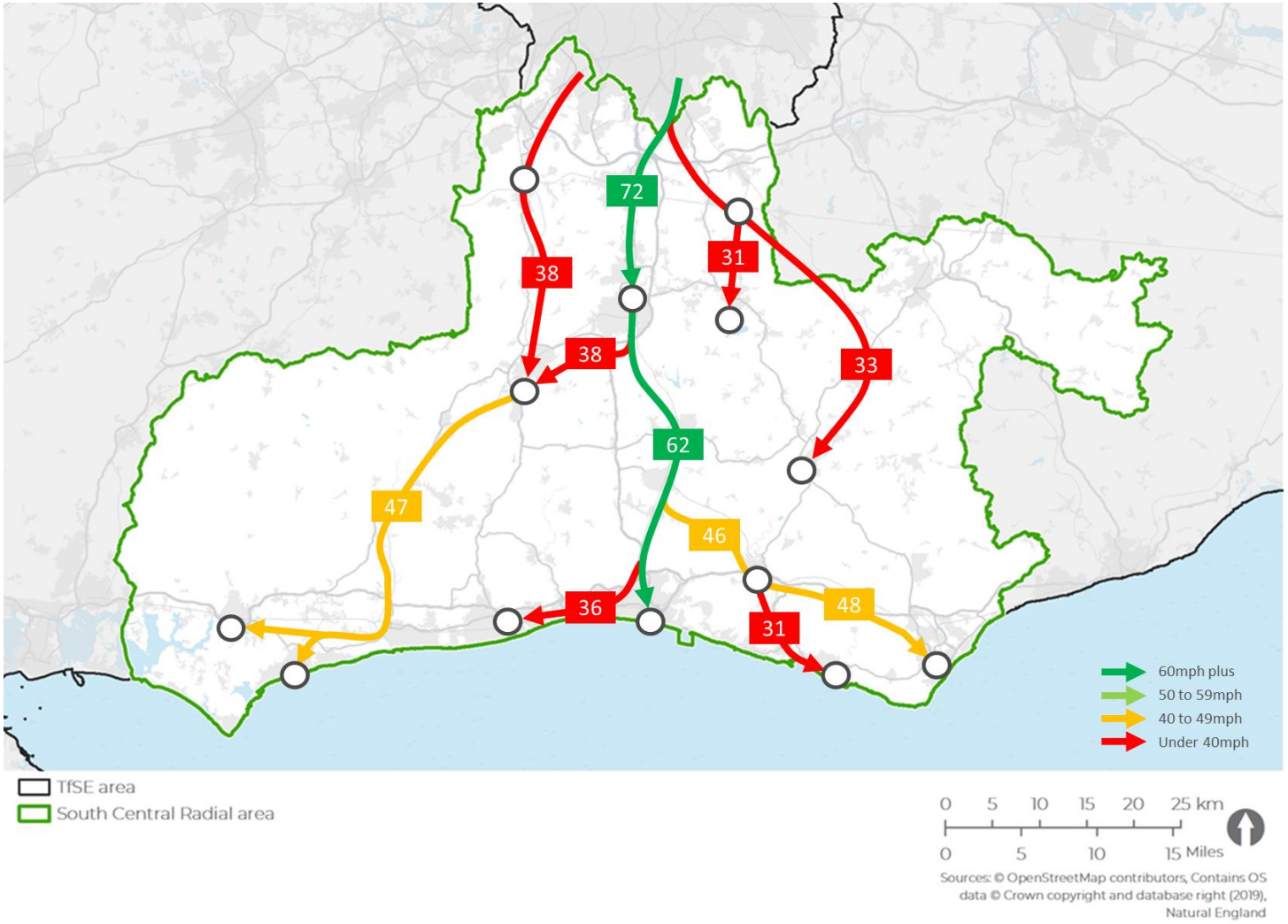
The differences in connectivity provided is especially stark when compared to the excellent connectivity provided by the Brighton Main Line (see **Figure 2.25**).

The slower speeds off the Brighton Main Line reflect the alignment of the track, signalling arrangements, and the passenger rail service calling pattern.

Furthermore, there are gaps in the rail network (e.g. Uckfield - Lewes) and poor integration between South Coast rail services and local bus services. This is particularly evident in fares, retail, and ticketing (integrated tickets and zonal fares are only available for London services).

The difference in rail connectivity means places like Eastbourne and Bognor Regis may need to "work harder" to attract investment compared to better connected Major Economic Hubs such as Brighton and Hove. This may explain why areas like Bognor Regis have generally weaker socioeconomic outcomes than Brighton.

**Figure 2.25: Typical average speeds on the London to Sussex Coast Area's railways**




*Source: Steer analysis*

# 17 There are several congestion, road safety, and air quality "hot spots" in the area

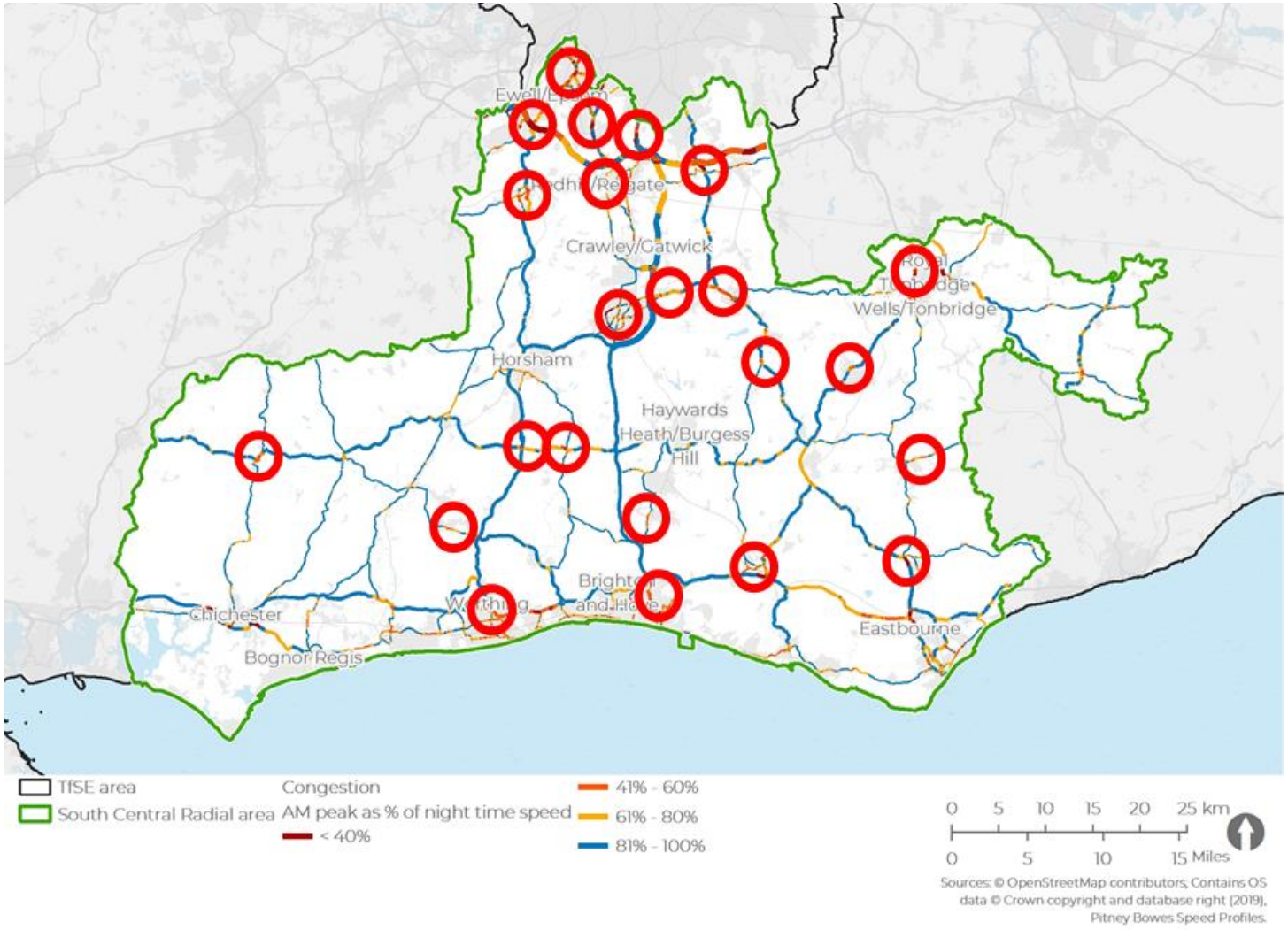
**These hotpots can significantly blight an area's economy, environment, and quality of life for residents, businesses, and visitors.**

**Figure 2.26**, which is based on **Figure 1.15 in the Evidence Base Report**, shows congestion hotspots on the highway network in the London to Sussex Coast Area.

Congestion, road safety, and air quality hot spots tend to arise at the same location. This is often where highway infrastructure is not adequate to accommodate the traffic demand placed upon it. In the London to Sussex Coast Area, this is observed at major junctions, town and city centres, and on some sections of the Strategic and Major Road networks.

Congestion undermines the efficiency of the transport network and the economy, while poor safety and air quality harms human heath. These hotspots are often hostile environments for vulnerable road users and can act to deter people from choosing to walk or cycle in these areas.

**Figure 2.26: Congestion hot spots in the London to Sussex Coast Area**



# 18 The area's major highways do not have enough capacity to accommodate planned growth

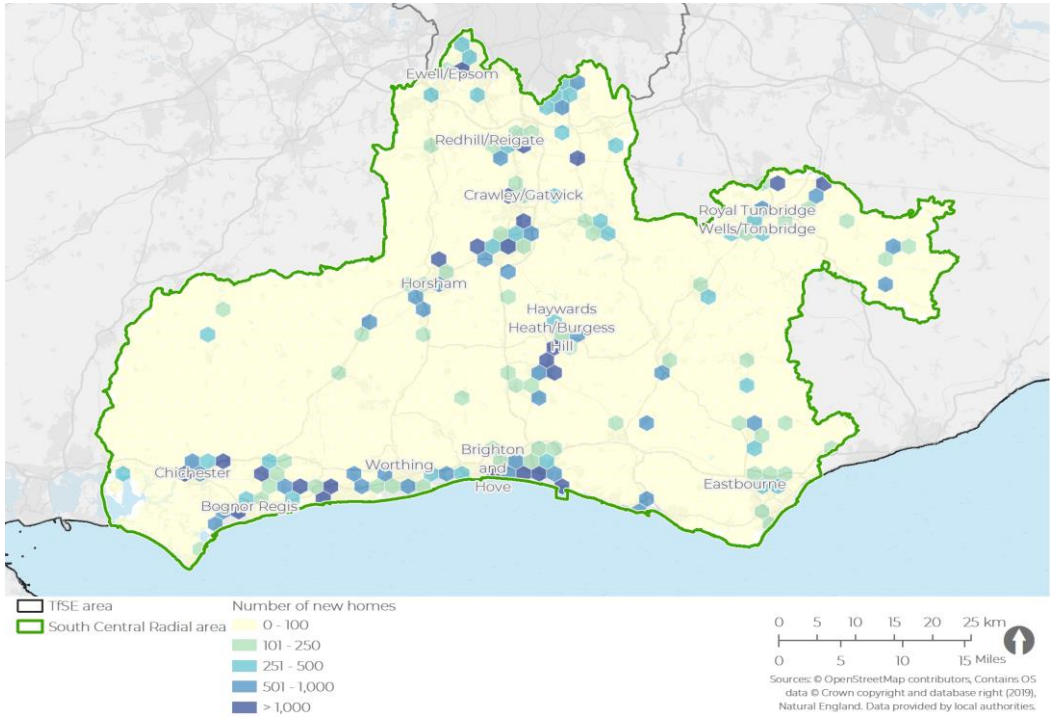
**Building on Problem Statements 4 and 17, planned housing growth will only serve to add pressure to the highway network.**

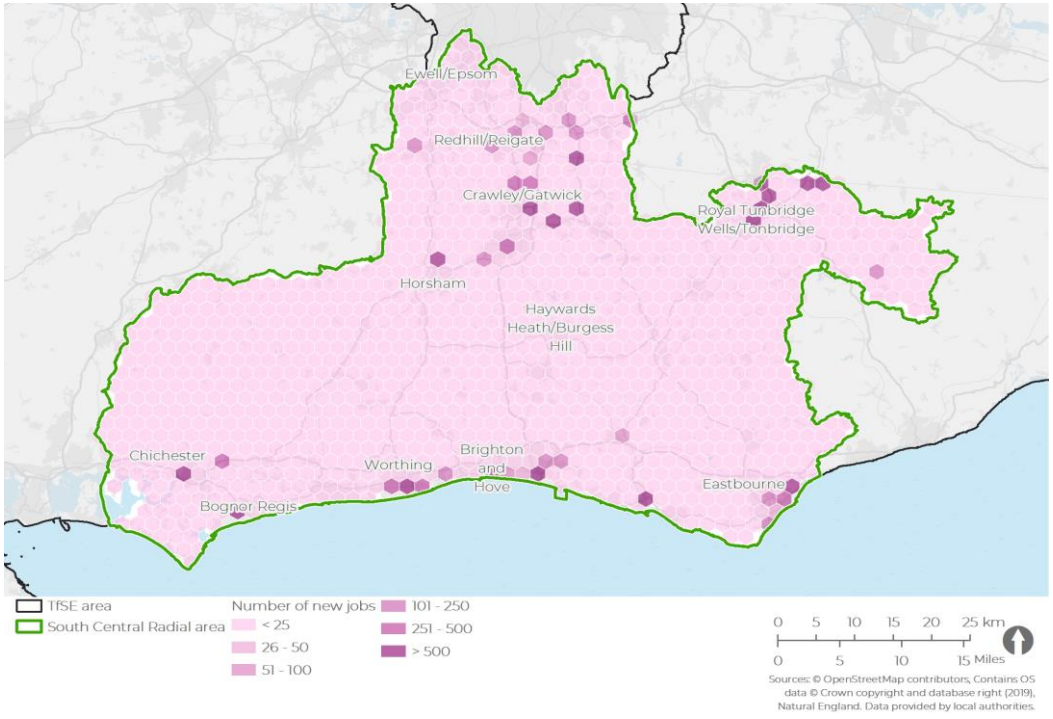
**Figure 2.27** shows the housing and employment growth planned for this area. There is clearly an imbalance in employment and housing growth in some areas.

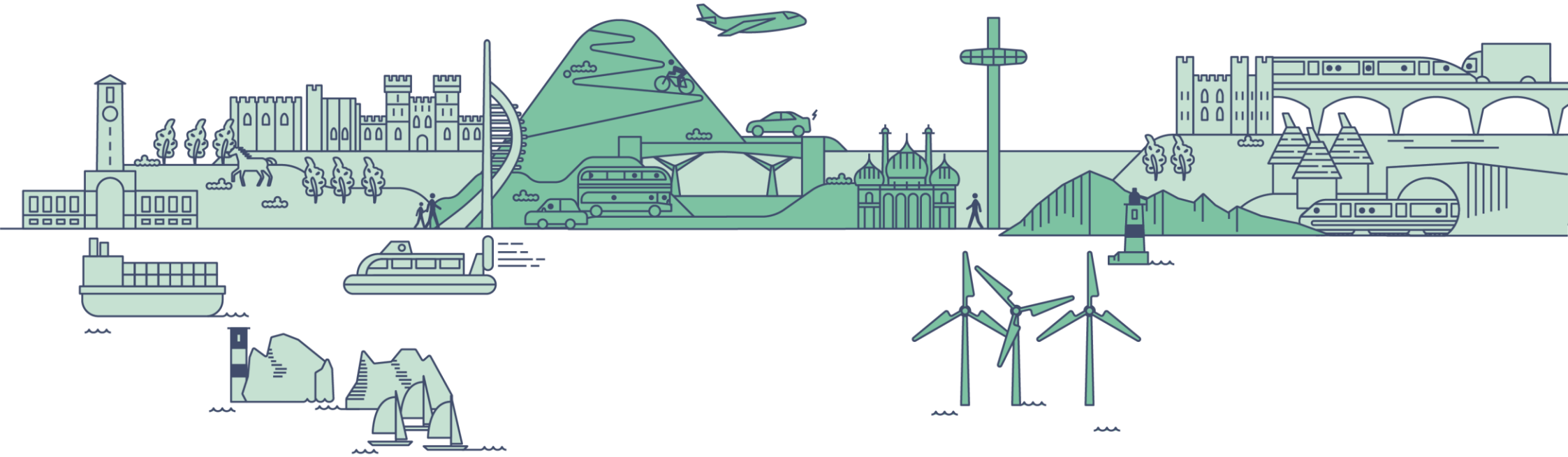
The area is expected to accommodate significant housing growth, particularly in the Horsham, Haywards Heath, and Burgess Hill areas. The pattern of development and the apparent imbalance of housing growth versus job growth (the latter is expected to be more concentrated on the Sussex Coast and in the Gatwick Diamond area)

is likely to drive higher demand for highway capacity. This in turn is expected to place pressure on parts of the highway network that already experience regular congestion. There is a risk that many of the congestion, safety, and air quality issues highlighted in the previous page could worsen if not action is taken to mitigate these impacts.

**Figure 2.27: Housing allocations in the London to Sussex Coast Area**





# Part 2c

## Baseline

## Baseline and Business As Usual

**In 2018, TfSE commissioned Steer to develop a model to test the impact of the scenarios Created to support the development of for Transport Strategy for South East England.**

This model, known as 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.

This model has been used to establish a baseline for socioeconomic, environmental, and transport indicators 2018 to 2050. The baseline forecasts of population and employment growth used by SEELUM were taken from the Department for Transport's National Trip End Model (NTEM).

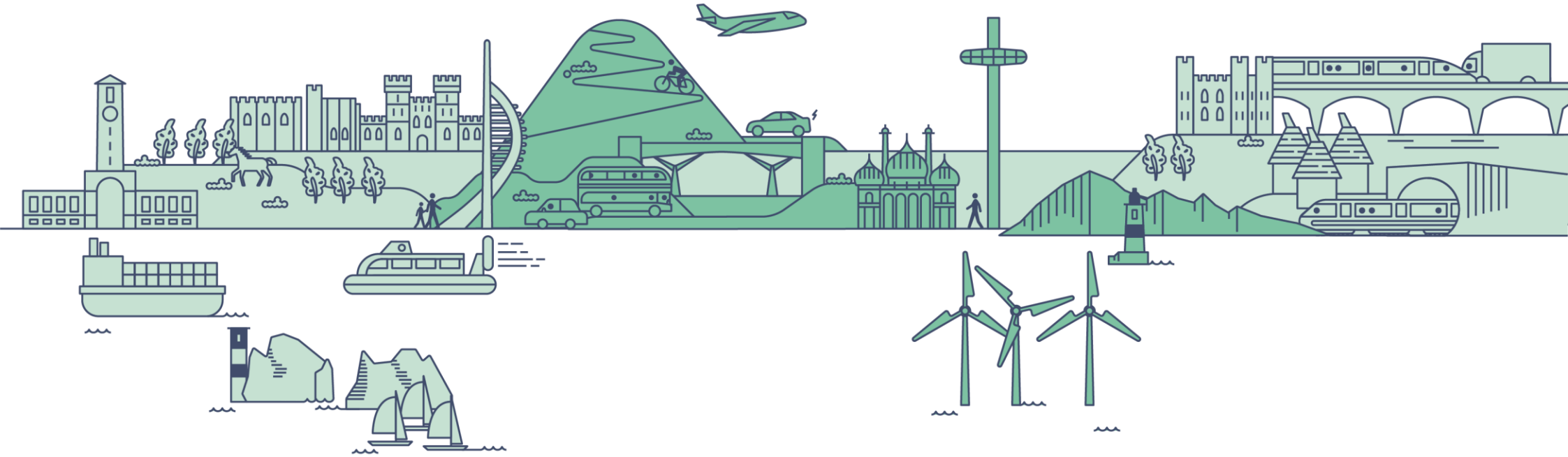
To stimulate and accommodate this growth, SEELUM was supplied with proportional increases in the land available for housing and commercial use in each zone, equal to the proportional growth implied by NTEM. The new land is assumed to become available linearly from 2018 to 2050.

**Table 2.1:** Baseline projections in SEELUM for the London to Sussex Coast Area

| Metric | Baseline (2018) | Business As Usual (2050) | Change (%) |
|---|---|---|---|
| **Socioeconomic metrics** | | | |
| Population | 1,715,983 | 1,955,350 | 13.9% |
| Employment | 744,722 | 841,290 | 13.0% |
| GVA | 38,711,541,380 | 84,913,711,680 | 119.3% |
| **Transport metrics** | | | |
| Car trips | 3,114,832 | 3,817,387 | 22.6% |
| Rail trips | 181,654 | 238,352 | 31.2% |
| Bus trips | 280,327 | 364,944 | 30.2% |
| Active travel trips | 1,161,372 | 1,099,138 | (5.4%) |

All outputs of the modelling of Packages of Interventions included in this study are presented as comparisons against the Business As Usual metrics for the year 2050, as presented in **Table 2.1** above. In some cases, outputs are also presented for 2022.

Further information about how SEELUM was developed and used to model Packages of Interventions for this study is provided in Part 3 (Economic Dimension).



# Part 2d

## Strategic Vision and Objectives

# Vision

TfSE's Transport Strategy for the South East sets out an ambitious vision for a sustainable, high performing, net-zero carbon transport system. We have applied this vision to the London to Sussex Coast Area to develop a vision statement for this area.

## TfSE Vision Statement

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.

## London to Sussex Coast Vision Statement

The London to Sussex Coast Area will develop a sustainable, prosperous, balanced economy to provide opportunities for its residents, businesses, and visitors to thrive.

The area's economy will be more resilient to the economic shocks and will leverage the innovation and talents of the London to Sussex Coast Area's people to develop successful businesses.

The transport networks supporting the London to Sussex Coast Area will be reliable, resilient, well connected, and accessible. They will be aggressively de-carbonised to deliver a net-zero carbon economy by 2050.

The communities of the London to Sussex Coast Area will be planned provide affordable housing for all and will be designed to promote sustainable travel outcomes.

# Objectives

A high performing, multi-modal transport system will ensure this study helps deliver the following six objectives:

## Economy

The London to Sussex Coast Area's transport systems will boost prosperity for all and reduce the disparity in socioeconomic outcomes. It will do so in a sustainable manner, and not at "any cost" to society and the environment. It will achieve this by:

- Boosting productivity through better skills matching, knowledge sharing and agglomeration;
- Improving transport network efficiency, reliability, and resilience;
- Ensuring digital and energy networks can meet future transport needs;
- Reducing costs for businesses; and
- Attracting investment in high growth, high value opportunities.

## Society

The London to Sussex Coast Area's transport systems will enable better and more equitable socioeconomic outcomes:

- Supporting better place-making and creating new sustainable communities;
- Enabling residents to easily access employment, affordable housing and services – particularly for those who do not have access to a car;
- Increasing the affordability and availability of convenient, high quality, active travel and public transport options;
- Ensuring that interventions are suitable for all users including the elderly and individuals of reduced mobility and other additional needs; and
- Enabling deprived communities to attract investment and achieve more equitable socioeconomic outcomes.

## Natural and Historic Environment

The London to Sussex Coast Area's transport systems will protect and enhance the natural and historic environment by:

- Adopting the principles of environmental net gain;
- Avoiding interventions that significantly and permanently undermine protected environments, in particular landscape, historic and ecological designations;
- Reducing the impact of transport operations on ecosystem services; and
- Improving public and active transport access to natural, protected, and historic environments.

# Objectives

A high performing, multi-modal transport system will ensure this study helps deliver the following six objectives:

## Climate Change

The London to Sussex Coast Area's transport systems will move to net zero carbon and minimise disruption from climate change by:

- Reducing the need to travel;
- Enabling and growing active travel;
- Shifting passenger and freight travel from fossil fuel to non carbon emission energy;
- Improving transport network energy efficiency; and
- Improving transport network resilience to climate events such as flooding, high temperatures, drought and storm events.

## Reliability and Resilience

The London to Sussex Coast Area's economy and transport systems will strengthen its resilience to external shocks by:

- Reducing the probability and impact of external shocks disrupting the area's transport networks;
- Building the right capacity and capability to respond effectively and quickly to external shocks;
- Enabling the area's transport systems to recover quickly from disruption;
- Consistently delivering high levels of reliability during normal periods of operation; and
- Enabling the economy to grow and diversify to enable the area to effectively respond to future economic shocks.

## Sustainable Integrated Planning

The London to Sussex Coast Area will provide the affordable housing the area needs, but in a way that promotes sustainable travel outcomes by:

- Promoting development that reduces the need for residents to travel long distances to access employment, education, services, and transport hubs;
- Promoting development that encourages active travel and public transport over private car;
- Promoting development on and/or near to existing public transport corridors and hubs; and
- Enabling a balance of housing and employment growth to prevent significant imbalances within and between Major Economic Hubs.

# Vision for the London to Sussex Coast Area Study

Our vision for the London to Sussex Coast Area is to develop a transport network that builds on earlier success, strengthens the area's transport networks' resilience, supports sustainable growth, and delivers for all modes. A breakdown of this vision is described in **Figure 2.28** below.

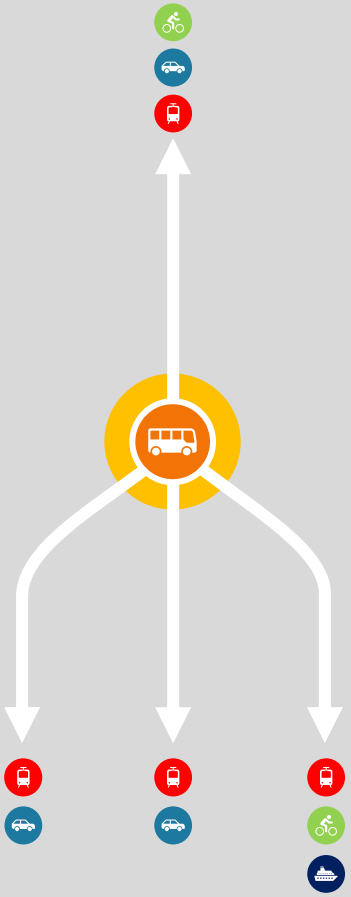
**Figure 2.28: :** Vision for the London to Sussex Coast Area's transport system

**London to Sussex Coast Area today**

The current London to Sussex Coast area is characterised by one developed north – south corridor, which fans out into three corridors south of Crawley.

Crawley and Gatwick are served by an excellent Bus Rapid Transit system (Fastway).

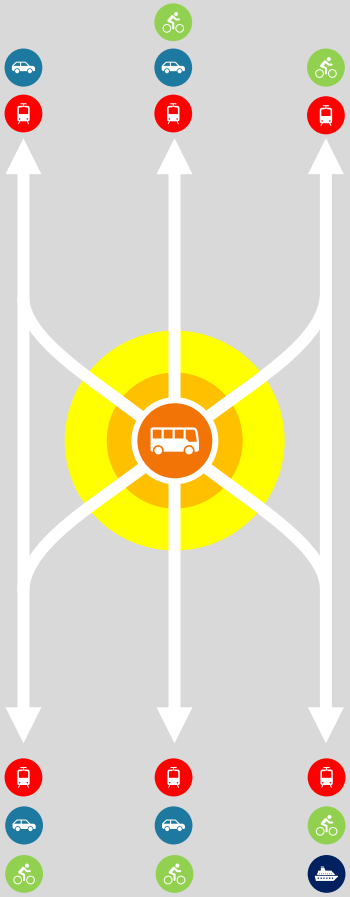
There are gaps the resilience of all modes. In summary, any disruption on the principle rail and/or highway links north of Gatwick effectively "cut off" the Sussex Coast from London and the M25.



**London to Sussex Coast Area in 2050**

Our vision for the London to Sussex Coast Area:

- **builds on earlier success** by expanding mass transit in Crawley and Brighton;
- **strengthens resilience** by improving railway, highway, and active travel north-south infrastructure;
- **supports sustainable growth** by providing capacity for housing in the Gatwick Diamond to grow; and
- **delivers for all modes** by including packages for every mode of transport.



# Strategic Themes

## Multi modal solution

**Transport is too often planned, funded and delivered within modal silos. TfSE and its partners propose a multi modal solution which takes account of complementarities between modes, but also integrates demand management and wider policy measures.**

Our vision acknowledges that people do not think about modes of transport that make up their journey, they think about the journey as a whole. Our vision is for a transport network that enables seamless trips: a faster and more reliable strategic network paired with improvements to first mile last mile connectivity.

Our vision is for the current transport network to better serve different people journey purposes and modes. Improvements to the highway network, for instance, will improve car trips but will also enable faster and more frequent mass transit and increased active travel participation.

This vision seeks a move away from modally siloised planning, governance and funding, to a multi modal transport solution.

## Climate Change and Sustainability

**Transport has a crucial role to play in delivering on environmental, social and economic goals. This vision seeks to address these goals by supporting people to shift to more sustainable modes.**

Transport accounts for a more than a quarter of the UK's carbons emissions. With faster, safer and more reliable rail, bus and active travel journeys, our vision seeks to increase the attractiveness of transport modes which have a positive impact on the environment.

Our vision acknowledges issues of deprivation and affordability and promotes sustainable transport interventions to improve connectivity to housing and employment locations.

We have also identified opportunities where transport can stimulate regeneration and placemaking. For instance, we propose moving some strategic highway routes away from a town centres, enabling a more people-friendly urban realm to be created and a step change in the quality of place.

The rest of this section sets out the key strategic themes of the London to Sussex Coast Area vision.

## Regeneration and Growth

**The London to Sussex Coast Area is expected to accommodate significant housing growth, particularly in the Horsham, Haywards Heath, and Burgess Hill areas. Our vision will ensure residents of new developments can access employment, affordable housing and services**

Development growth will be accommodated through an increase in transport provision across multiple modes. In Horsham, Haywards Heath and Burgess Hill this will include:

- Connection into a Mass Transit Network facilitating fast and reliable journeys to neighbouring towns and areas of employment;
- A new link road efficiently connecting Horsham's growth sites into Crawley town centre and the strategic road network; and
- New and improved cycle routes linking Horsham to Crawley and Haywards Heath to Burgess Hill.

This multi modal approach will support better place-making and creation of new sustainable communities

# Strategic Themes

## World Class Mass Transit Systems

**The London to Sussex Coast Area is home to urban conurbations of sufficient size and density to justify world class mass transit systems. Our vision will deliver the quality of provision to stimulate a step change in sustainable transport mode share.**

We will build on the success of the existing Fastway system centred around Crawley and Gatwick Airport, proposing greater levels of segregration and bus priority, improved journey times, higher quality buses and better network integration.

This MRT system would be delivered as Fastway extensions to Redhill to the north, East Grinstead and Tunbridge Wells to the east, Burgess Hill to the south and Horsham to the west. The network would be integrated with railway stations and strategic highway routes to enable seamless journeys from origin to destination.

Where Fastway extensions are not appropriate, our vision is for increased inter-urban bus frequencies and bus priority at key junctions and pinchpoints to safeguard journey time reliability.

## Resilient Radial Corridors

**The London to Sussex Coast Area is served by one key rail and highway "spine" – the Brighton Main Line, and the M23/A23. This means the area is vulnerable to significant disruption if there are any delays on this corridor. TfSE and its partners propose a vision which brings greater transport resilience to this area.**

The intensity of services on the Brighton Main Line means a small incident can have a significant impact on the wider network, especially if it occurs north of Gatwick. Our vision for greater resilience includes the reopening of the Uckfield – Lewes presenting an alternative route between Brighton and London, providing relief to the Brighton Main Line whilst opening up new destinations.

Disruption on the M23/A23 can force traffic on to the A22 and A24, which are not well suited to heavy traffic. We propose a number of highway intervention along these two major roads which move strategic traffic out of town centres, enabling them to play a more strategic role, de-conflicting local and longer-distance traffic, and supporting safety and air quality objectives.

## East – West Connectivity

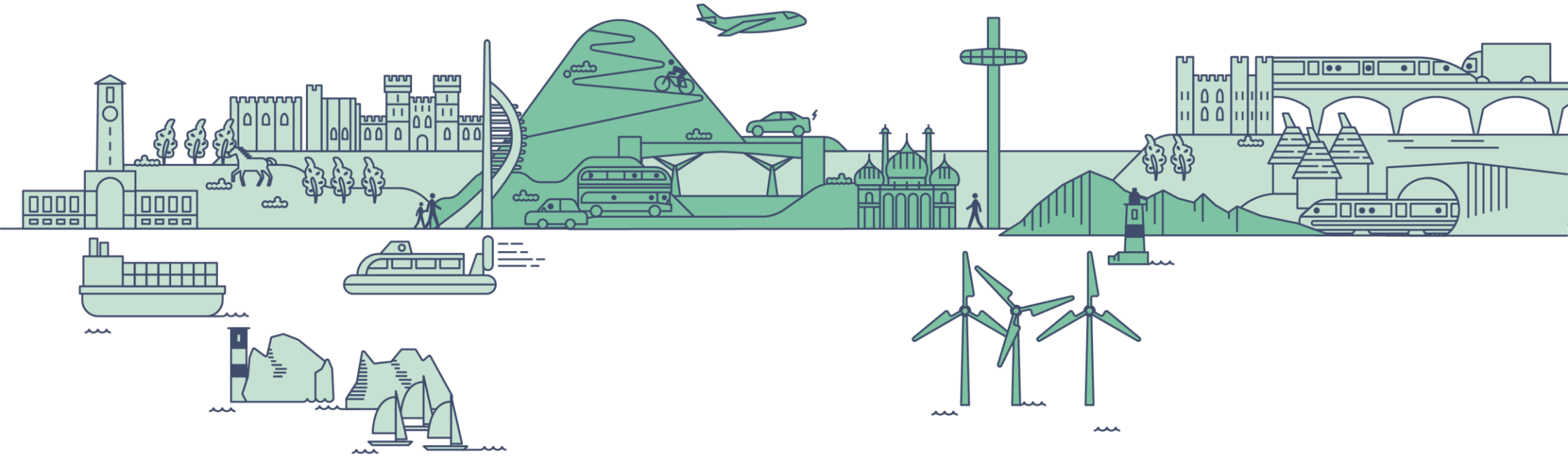
**The London to Sussex Coast Area suffers from a lack of east west connectivity with the transport links that do exist offering slow and unreliable journeys. TfSE and its partners propose a vision which addresses these issues, increasing social and economic interection between neighbouring towns.**

Our vision proposes a number of extensions to the existing Fastway network. This will bring about improved east – west connectivity, seamlessly linking Horsham to East Grinstead, Tunbridge Wells and Burgess Hill

Our vision also brings back into use the Uckfield – Lewes railway and the Tunbridge Wells West – Tunbridge Wells railway creating a new east west rail link between the Brighton Mainline and the Hastings Line.

Faster services on the Arun Valley Line and East Coastway Line will deliver further enhancements to east –west connectivity.

This multi modal approach will bring major centres within the area closer together stimulation agglomeration and the resulting productivity benefits.



# Part 2e

## Packages of Interventions

# Combined Approach to Package Development

## A Top Down and Bottom Up View

**TfSE has worked with key stakeholders and technical advisors to develop a set of coherent Packages that, together, are designed to deliver TfSE's vision and objectives for the London to Sussex Coast Area.**

These Packages have been developed through workshops, discussions, and careful analysis of results of the assessment of the long list of interventions described earlier.

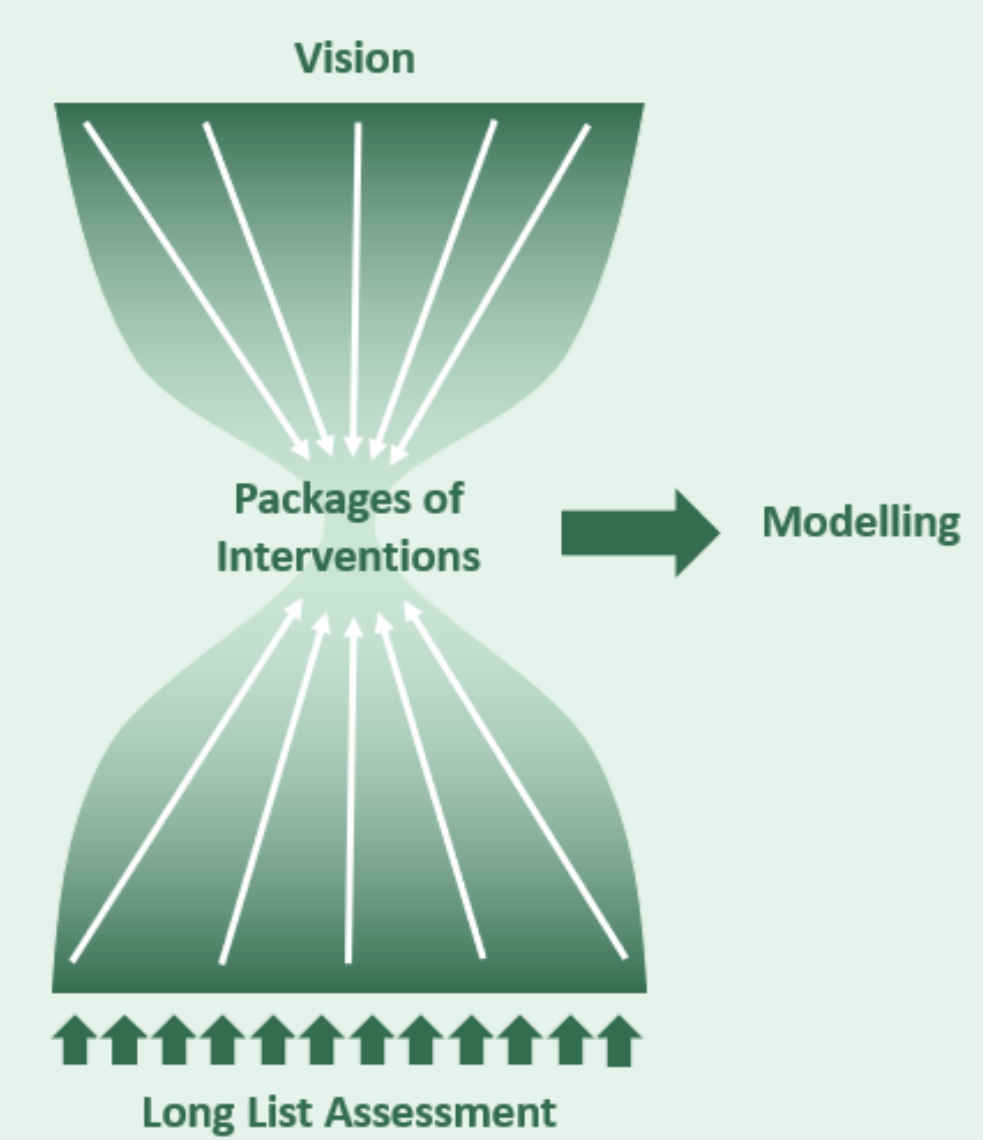
The Packages combine an overarching vision for the London to Sussex Coast area with the results of the Multi Criteria Analytical Framework.

In essence, this reflects both a 'top down' i.e., vision led approach and a 'bottom up' i.e., individual intervention assessment approach. While planning has taken place considering multi-modal options and how Packages group and integrate, they are presented in the following narrative by mode or groups of modes. This is partly as a product of how they needed to modelled, but also to talk directly to key stakeholders and modal-based planners of national networks (e.g. Network Rail and National Highways), and possible funding sources – often siloed.

**Figure 2.29** to the right illustrates the essence of this combined approach.

As discussed earlier, we have used a land use and transport interaction model to simulate the impacts of these Packages of Interventions. The results from this modelling exercise are presented in Part 3 (Economic Case). We present summary outputs from our modelling in **Part 3b**.

**Figure 2.29** Approach to Package development



# Recommendations

In conclusion, this report recommends that the following five packages of interventions for the London to Sussex Coast Area Study are taken forward into the next stage of development (Stage D – see overleaf for more details).

### Package J + K: London – Sussex Coast Rail (Core)

- **J1** Croydon Area Remodelling Scheme
- **J2** Brighton Main Line - 100mph Operation
- **J3** Brighton Station Additional Platform
- **J4** Reigate Station Upgrade
- **J5** Arun Valley Line - Faster Services
- **J6** East Coastway Line - Faster Services
- **J7** Brighton Main Line - Reinstate Cross Country Services
- **J8** New Station to the North East of Horsham
- **J9** Newhaven Port Capacity and Rail Freight Interchange Upgrades
- **J10** Uckfield Branch Line - Hurst Green to Uckfield Electrification and Capacity Enhancements
- **J11** Redhill Aerodrome Chord
- **K1** Uckfield - Lewes Wealden Line Reopening - Traction and Capacity Enhancements
- **K2** Uckfield - Lewes Wealden Line Reopening - Reconfiguration at Lewes
- **K3** Spa Valley Line Modern Operations Reopening - Eridge to Tunbridge Wells West to Tunbridge Wells

### Package L: London – Sussex Coast Mass Transit

- **L1** Fastway Extension: Crawley - Horsham
- **L2** Fastway Extension: Crawley - East Grinstead
- **L3** Fastway Extension: Haywards Heath - Burgess Hill
- **L4** Fastway Extension: Crawley - Redhill
- **L5** A22 Corridor Rural Bus Service Enhancements
- **L6** A23 Corridor Rural Bus Service Enhancements
- **L7** A24 Corridor Rural Bus Service Enhancements
- **L8** A26 Corridor Lewes - Royal Tunbridge Wells Rural Bus Service Enhancements
- **L9** A26 Corridor Newhaven Area Rural Bus Service Enhancements
- **L10** A272 Corridor Rural Bus Service Enhancements
- **L11** A264 Corridor Rural Bus Service Enhancements
- **L12** A29 Corridor Rural Bus Service Enhancements
- **L13** A283 Corridor Rural Bus Service Enhancements
- **L14** A281 Corridor Rural Bus Service Enhancements
- **L15** Three Bridges Strategic Mobility Hub

### Package M: Sussex Coast Active Travel

- **M1** Burgess Hill/Haywards Heath Local Cycleways
- **M2** East Grinstead Local Cycleways
- **M3** Eastbourne/Hailsham Local Cycleways
- **M4** Gatwick/Crawley Local Cycleways
- **M5** Horsham Local Cycleways
- **M6** Lewes/Newhaven Local Cycleways
- **M7** Reigate/Redhill Local Cycleways
- **M8** East Sussex Inter-urban Cycleways
- **M9** Surrey Inter-urban Cycleways
- **M10** West Sussex Inter-urban Cycleways
- **M11** New London - Brighton National Cycle Network Corridor
- **M12** New Crawley - Chichester National Cycle Network Corridor
- **M13** London - Paris New "Avenue Verte"

### Package N: London – Sussex Coast Highways

- **N1** A22 N Corridor (Tandridge) - South Godstone to East Grinstead Enhancements (LLM Pipeline)
- **N2** A24/A243 Knoll Roundabout and M25 J9A (MRN Pipeline)
- **N3** A22 Corridor Package 2 (Polegate - Halisham New Offline Carriageway) (MRN Pipeline)
- **N4** A2270/A2101 Corridor Movement and Access Package (MRN Pipeline)
- **N5** M23 Junction 8a New Junction and Link Road - Redhill
- **N6** M23 Junction 9 Enhancements - Gatwick
- **N7** A23 Carriageway Improvements - Gatwick to Crawley
- **N8** A264 Horsham - Pease Pottage Carriageway Enhancements
- **N9** A264 Crawley - East Grinstead Dualling and Cycleway
- **N10** A272 Crawley Western Link Road and Cycleway
- **N11** A24 Dorking Bypass
- **N12** A24 Dorking - Capel New Roundabout
- **N13** A24 Corridor Improvements Horsham to Capel (LLM Pipeline)
- **N14** A23 Hickstead and Bolney Junction Enhancements
- **N15** A23/A27 Patcham Interchange Junction Enhancements
- **N16** A26 Lewes - Newhaven Realignment and Junction Enhancements
- **N17** A26 Lewes - Uckfield Enhancements
- **N18** A22 Uckfield Bypass Dualling
- **N19** A22 Smart Road Trial Proposition Study

### Global Policy Package

To be defined but likely to include new mobility, rural connectivity, freight, demand management, and accelerated decarbonisation interventions

# Packages J & K: London – Sussex Coast Rail (Core) | London – Sussex Coast Rail (Reinstatements)

## Overview

**In collaboration with Network Rail and the Local Transport Authorities a package of rail interventions has been developed which will enhance connectivity, and reliability between London and the Sussex Coast.**

The **Core Rail Package** addresses key bottlenecks on the Brighton Main Line, enabling faster, more reliable services. It also provides line speed enhancements allowing for faster journeys on the Arun Valley Line and the East Coastway Line. Electrification of the Uckfield Branch of the Oxted Line stimulates positive operational and environmental impacts.

The **Railway Reinstatements Package** brings back into use the Uckfield – Lewes railway and the Tunbridge Wells West – Tunbridge Wells (Central) railway. This will increase resilience of rail connectivity between the South Coast and London whilst creating a new east west rail link between the Brighton Main Line and Hastings Line.

Several other historical railways have been considered for reinstatement, but the study found the conversion to active travel corridors would have a more positive impact.

## Benefits

- Improvements to **resilience** of north south trips
- Increased **reliability** on Brighton Main Line serving key strategic locations
- **Faster journeys** on Brighton Main Line, Arun Valley Line and East Coastway Line.
- Improved access to **boost** (currently) **less prosperous coastal areas**.
- Enhanced **connectivity** from Brighton via Lewes and Uckfield to Tunbridge Wells.
- Large reduction in **carbon emissions**.

## Modelling Results

**£375m** GVA uplift per annum (by 2050, 2020 prices)

**45,000** More return rail trips per weekday

**10,000** Fewer return car trips per weekday

# Package L: London – Sussex Coast Mass Transit

## Overview

**TfSE and the Area Study Working Group believe that there are parts of the London to Sussex Coast Area which are populous and dense enough to support a bus based-transit network.**

The **Mass Transit Package** will build on the success of the Fastway Bus Rapid Transit system in Crawley/Gatwick. Its expansion will be on high growth corridors towards (and within) nearby Major Economic Hubs. This expansion will include investing in segregated bus infrastructure where feasible on corridors to the north (Redhill), south (Haywards Heath), east (East Grinstead and Tunbridge Wells) and the west (Horsham). In addition, mass transit systems are proposed for Brighton and Hove and the wider Sussex Coast, if feasible, including the Eastbourne/South Wealden area.

This system will be supported by general improvements to non-BRT buses and Strategic Mobility Hubs at Falmer, Three Bridges, and on the periphery of Eastbourne. The overall mass transit network and service provision will be designed to provide an integrated network which facilitates seamless journeys across the London to Sussex Coast area and beyond.

## Benefits

- Improvement in the **speed, frequency** and **connectivity** of mass transit services
- Better **interchange** and **service quality** at Strategic Mobility Hubs
- Improvement in the **journey experience** with better quality vehicles
- **Significant mode shift** from car to bus

## Modelling Results

**£100m** GVA uplift per annum (by 2050, 2020 prices)

**60,000** More return mass transit trips per weekday

**35,000** Fewer return car trips per weekday




TRANSPORT FOR THE South East

# Package M: London – Sussex Coast Active Travel

## Overview

**All four Local Transport Authorities in the London to Sussex Coast area have ambitious plans to improve cycling and walking in their areas. This ambition is supported by this study.**

The **Active Travel Package** expands on this, delivering improvements to enable reinstatement of the National Cycle Network routes between Crawley and Brighton & Hove and between Crawley and Chichester. This will be complemented by a more direct Avenue Verte, serving international leisure trips.

The package also includes continued roll out of regional cycleways in the four Local Transport Authorities. This will involve development of consistent branding and wayfinding and creation of an integrated network with assurance of cycle path quality.

Several highway interventions – including bypasses at Godstone and improvements to the Uckfield bypass – unlock opportunities for pedestrians and cyclists by freeing up more public space in town centres.

## Benefits

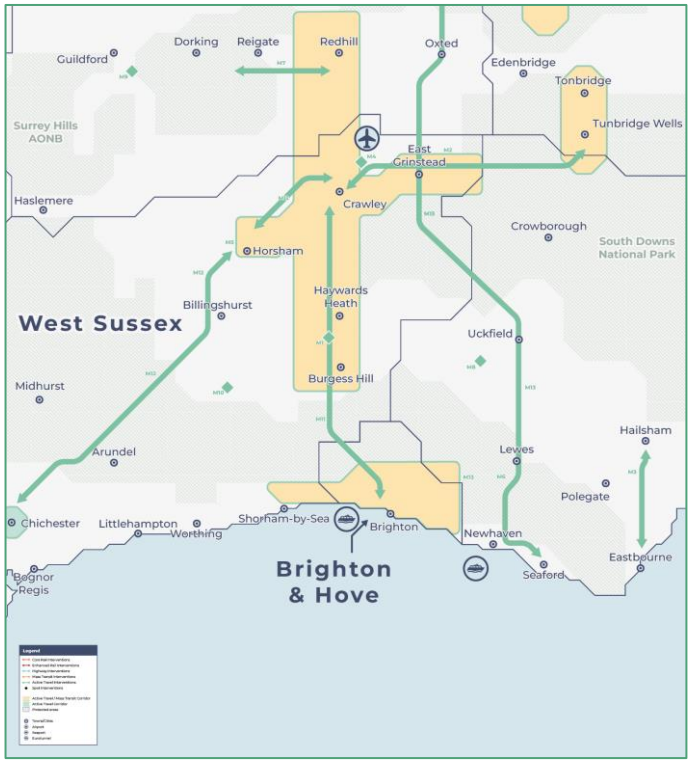
- Significant **mode shift** from car to active travel, with associated health benefits
- Improvements in **air quality**, particularly in urban parts of the area
- Improvements to the urban and rural public realm in London to Sussex Coast Area, improving **quality of life** and unlocking **regeneration** opportunities

## Modelling Results

**£10m** GVA uplift per annum (by 2050, 2020 prices)

**40,000** More return active travel trips per weekday

**35,000** Fewer return car trips per weekday






TRANSPORT FOR THE South East

# Package N: London – Sussex Coast Highways

## Overview

**Components in the Highway Package have been designed to de-conflict local and longer-distance traffic, and support safety and air quality objectives. They should support (and be supported by) public transport improvements.**

This package includes interventions that support access to international gateways (M23 Junction 9), regeneration areas (Crawley Western Link Road), and placemaking (a Godstone bypass and improvements to the Uckfield bypass to reduce the amount of traffic diverting through the town, unlocking public spaces).

Also included is a new junction on the M23 for Redhill, which could be linked to the A23 and East Surrey Hospital by a new road running near to a nearby aerodrome. This would help relieve pressure on the A217 at Reigate Level Crossing, facilitating more rail services on the North Downs Line.

Several interventions unlock opportunities to reallocate road-space or to create shared road space to active travel and public transport such as A24 Horsham – Leatherhead and East Sussex's A2270/A2101 MRN Scheme.

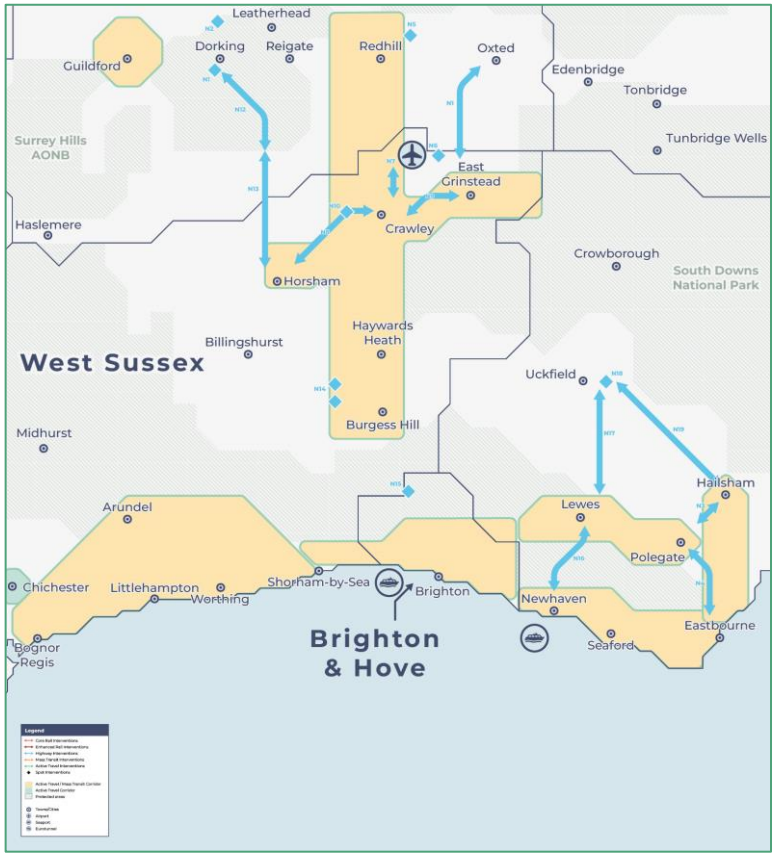
## Benefits

- **Safer highways**, notably in urban areas
- A more **reliable** and **resilient** highway network
- **Improved air quality** in urban areas
- Scope to **reallocate road space** to active travel and public transport

## Modelling Results

**£140m** GVA uplift per annum (by 2050, 2018 prices)

**5,000** *More* return car journeys per weekday



# Global Policy Packages

## Overview

**In addition to the location specific interventions, the Area Studies also identified a list of policy interventions that, in general, would apply across a large area (if not all) of South East England. These are known as Global Policy Interventions.**

The Global Policy Interventions have been assessed separately to the Area Specific interventions by using a consistent framework for the whole of the South East to reduce a long list of typologies to the short list of proposed interventions.

In total, 57 interventions were assessed by a:

- **Strategic Assessment:** Each intervention was assessed against the 15 Priorities included in TfSE's Transport Strategy for South East England. These priorities were grouped and are presented on the following page.
- **Economic Assessment:** Each intervention was against the 18 Criteria included in the DfT's Early Assessment and Sifting Tool (EAST).

The best performing interventions were grouped into typologies and are listed below.

## Approach

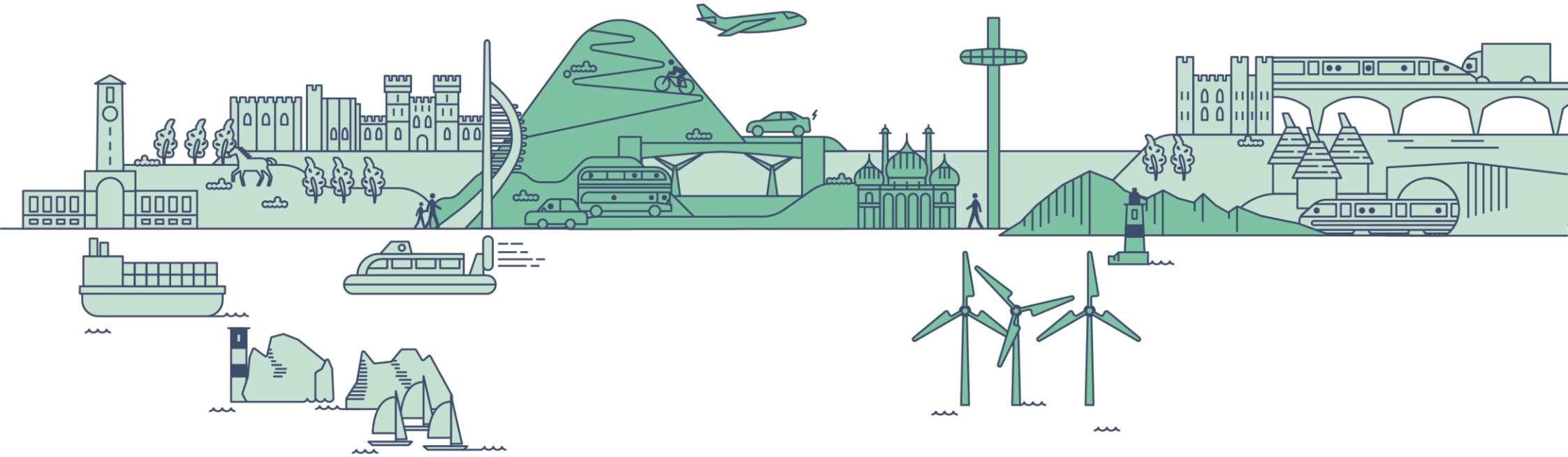
They were sourced from:

- **Area Study Working Groups** – the Steering Groups formed of representatives from Local Transport Authorities, infrastructure providers, and other key stakeholders.
- **Area Study Forums** – workshops attended by a much larger group of stakeholders representing operators, user groups, planning authorities, environmental groups, and others with an interest in each area.
- **TfSE's Future Mobility Study** – this work was commissioned in parallel with the earlier stages of the Area Study Programme and has produced a Draft Final Report and short list of recommended interventions.
- **TfSE's Freight and International Gateways Study** – which has also produced a short list of recommended interventions that cut across the whole of the South East.
- **Client and Project Teams** – capturing other relevant interventions

## Short Listed Global Policy Interventions

The Global Policy Packages are:

1. **Decarbonisation**: This delivers a faster trajectory towards net-zero than current trends are expected to yield.
2. **Public Transport Fares**: This reverses the real terms increase in the cost of public transport compared to motoring.
3. **Road User Charging**: This assumes the UK government develops a national road user charging system to replace funding currently raised from fuel duty,
4. **New Mobility**: This reflects the potential for new mobility (e.g., electric bikes) to boost active travel.
5. **Virtual Living**: The pandemic has shown how virtual working can help reduce demand for transport services.
6. **Integration and Access**: This delivers improvements in transport integration, and accessibility across and between all modes of transport. It also supports better integration between transport and spatial planning.

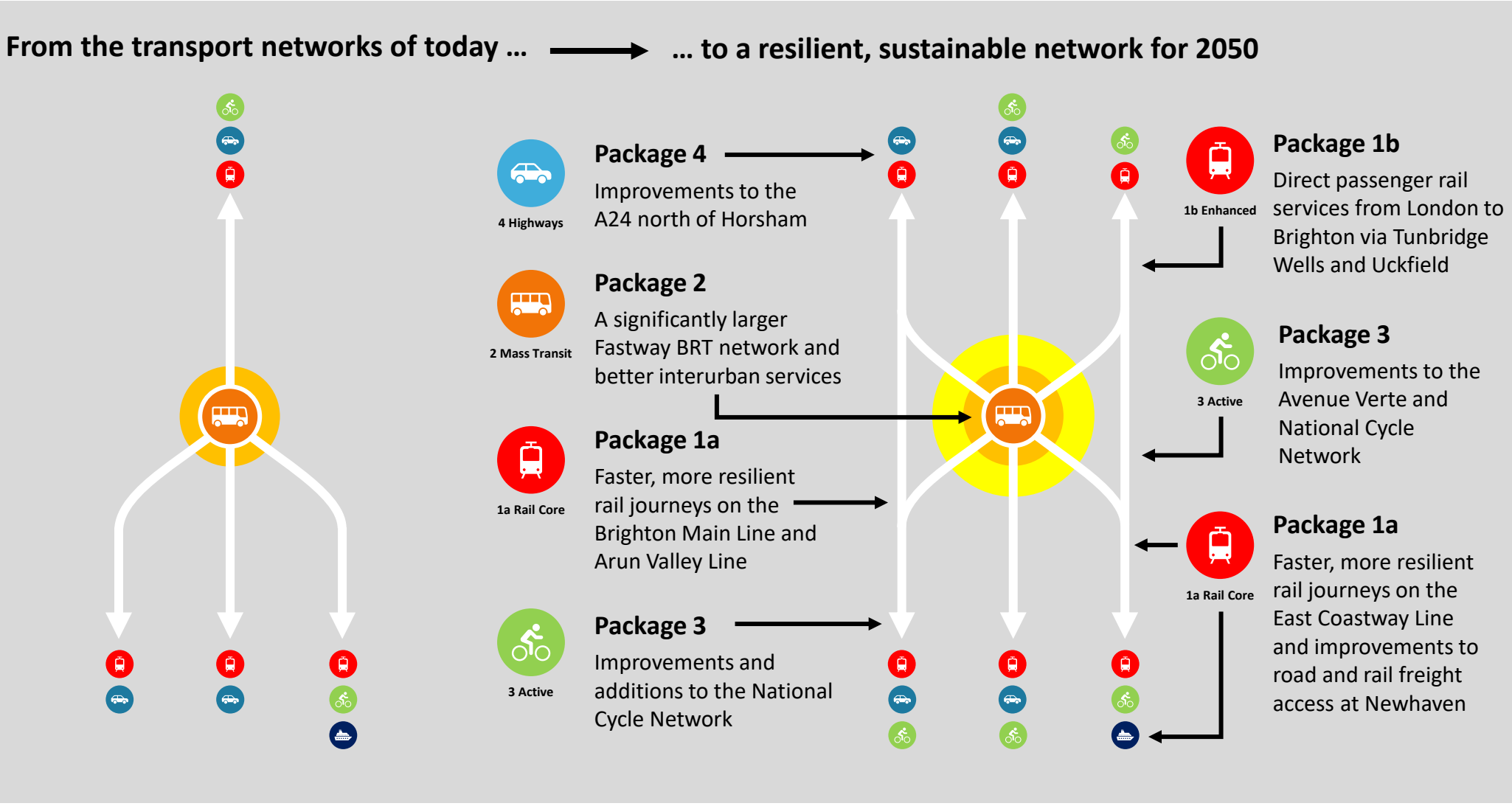


# Part 2f

## Theory of Change

**Figure 2.30** below summarises how each Package contributes to delivering our vision for the London to Sussex Coast Area.

**Figure 2.30: :** Vision for the London to Sussex Coast Area



# Package Alignment to Problem Statements and Objectives

## Alignment with Problem Statements

**Part 2b sets out the 25 Problem Statements that this SPOC aims to address.**

**Table 2.3** on the following page presents a qualitative assessment on the extent to which each Package of Interventions address each Problem Statement.

This assessment uses a simple scale, as shown below:

✓✓✓ Fully addresses Problem Statement

✓✓ Mostly addresses Problem Statement

✓ Partially addresses Problem Statement

**Table 2.3** includes a column on the right under the heading 'All Packages'. The scores in this column represent the highest score assigned to each of the individual packages. If one package scores two ticks and all other packages score none, then the column 'All Packages' is also assigned two ticks.

**Table 2.3 (overleaf) shows that – when Global Policies are included – all Problem Statements are addressed by the Packages presented in this report. It also shows that no single intervention or Package addresses all the problems, subsequently requiring a multi-modal solution.**

## Theory of Change Framework

**We have also mapped the Packages of Interventions to a Theory of Change Framework.**

This framework includes:

- **Issues**: What problems does the package of intervention address and what objectives does it hope to achieve?
- **Inputs**: What resources are needed to deliver the changes required to address the issues described above?
- **Outputs**: What will be the direct outputs of the inputs described above?
- **Outcomes**: What are the effects of the outputs?
- **Impacts**: What are the wider socioeconomic impacts delivered by the outcomes?

The Theory of Change Framework is presented in **Tables 2.4 to 2.8** overleaf with examples of how the Packages of Interventions address the multi-modal elements of the framework.

It demonstrates that together the Packages in the SPOC deliver **strategic benefits** to achieve the study's **multi-modal objectives.** All of the Packages are required in conjunction with one another for maximum success in delivering positive outcomes.

## **Table 2.2:** Problem Statement Mapping to Packages

| Problem Statement | 1a Rail (Core) | 1b Rail (Reinstatements) | 2 Mass Transit | 3 Active Travel | 4 Highways | Global Packages | All Packages |
|---|---|---|---|---|---|---|---|
| Decarbonisation | ✓✓ | ✓✓ | ✓✓✓ | ✓✓ | | ✓✓✓ | ✓✓✓ |
| Climate resilience | ✓✓✓ | ✓✓✓ | ✓✓✓ | ✓✓ | | ✓✓✓ | ✓✓✓ |
| Freight reliance on highways | ✓✓ | ✓ | | | | | ✓✓ |
| Housing | ✓✓✓ | ✓✓✓ | ✓✓✓ | ✓✓ | ✓✓✓ | | ✓✓✓ |
| Economic growth | ✓✓✓ | ✓✓ | ✓✓✓ | ✓ | ✓✓✓ | ✓✓ | ✓✓✓ |
| Rural communities | ✓ | ✓✓✓ | ✓✓ | ✓✓ | ✓✓ | ✓✓✓ | ✓✓✓ |
| Accessibility | ✓ | ✓✓ | ✓✓ | ✓ | | ✓✓ | ✓✓ |
| Cycle network gaps | | | | ✓✓✓ | | | ✓✓✓ |
| Active travel mode share | | | | ✓✓✓ | | ✓✓ | ✓✓✓ |
| Mass Transit gaps | | | ✓✓✓ | | ✓ | | ✓✓✓ |
| Interurban public transport gaps | | ✓✓✓ | ✓✓✓ | | ✓ | | ✓✓✓ |
| Information and ticketing | ✓ | ✓ | | | | ✓✓ | ✓✓ |
| Fare complexity and cost | ✓ | ✓ | | | | ✓✓✓ | ✓✓ |
| Rail network resilience | ✓✓✓ | | | | | | ✓✓✓ |
| Rail network capacity | ✓✓✓ | ✓✓✓ | | | | | ✓✓✓ |
| Rail network connectivity | ✓✓✓ | ✓✓✓ | | | | | ✓✓✓ |
| Highway congestion/air quality hot spots | ✓ | ✓ | ✓ | | ✓✓✓ | | ✓✓✓ |
| Highway capacity for growth | | | ✓ | | ✓✓✓ | | ✓✓✓ |

# Core Rail Package (1a) – Theory of Change Framework

## **Table 2.4:** Theory of Change Framework (Package 1a)

| Issues | Inputs | Outputs | Outcomes | Impacts |
|---|---|---|---|---|
| **Global Issues**<br>• Over-reliance of freight on highways<br>• Slower economic growth than neighbouring areas<br>• Need for additional housing with sustainable transport options<br>**Public Transport Issues**<br>• Inadequate mass transit offer<br>**Rail Network Issues**<br>• Poor resilience of Brighton Mainline<br>• Limited capacity on Brighton Mainline is not allocated to meet needs and aspirations of the Gatwick Area<br>• Connectivity is relatively poor for communities served by the Arun Valley Line, East Coastway Line, and Oxted Line Capacity | **Core Rail Package**<br>• Croydon Area Re-modelling<br>• Faster Brighton Main Line<br>• Faster Arun Valley services<br>• Faster East Coastway services<br>• Keymer Junction/Wivelsfield<br>• Brighton Station Platform<br>• Eliminate Joining and Splitting<br>• Reinstate Cross Country<br>• North East Horsham Station<br>• Newhaven Port Freight Access<br>• Electrification<br>• London Terminal Capacity<br>• Newhaven Rail Freight Improvements | • Faster Brighton Mainline, Arun Valley Line and East Coastway services (c. 5 minutes)<br>• Improved operating performance<br>• Improved interchange and quality of service at Brighton Station<br>• Enhanced connectivity to West Midlands and North West | • Boosting productivity through better skills matching, knowledge sharing and agglomeration;<br>• Improving transport network efficiency, reliability, and resilience;<br>• Enabling residents to easily access employment, affordable housing and services – particularly for those who do not have access to a car;<br>• Ensuring digital and energy networks can meet future transport needs.<br>• Ensuring that interventions are suitable for all users including the elderly and individuals of reduced mobility/other additional needs.<br>• Adopting the principles of environmental net gain.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Improving transport network energy efficiency.<br>• Improving transport network resilience to climate events such as flooding, high temperatures, drought and storm events.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Consistently delivering high levels of reliability.<br>• Promoting development on and/or near to existing public transport corridors and hubs. | • Boost prosperity for all and reduce the disparity in socioeconomic outcomes. Do so in a sustainable manner, and not at “any cost” to society and the environment.<br>• Protect and enhance the natural and historic environment.<br>• Move to net zero carbon and minimise disruption from climate change.<br>• Strengthen the area’s resilience to external shocks.<br>• Provide the affordable housing the area needs, but in a way that promotes sustainable travel outcomes. |

# Railway Reinstatements Package (1b) – Theory of Change Framework

## **Table 2.5:** Theory of Change Framework (Package 1b)

| Issues | Inputs | Outputs | Outcomes | Impacts |
|---|---|---|---|---|
| **Global Issues**<br>• Over-reliance of freight on highways<br>• Slower economic growth than neighbouring areas<br>• Need for additional housing with sustainable transport options<br>**Public Transport Issues**<br>• Inadequate mass transit offer<br>**Rail Network Issues**<br>• Poor resilience of Brighton Mainline<br>• Limited capacity on Brighton Mainline is not allocated to meet needs and aspirations of the Gatwick Area<br>• Connectivity is relatively poor for communities served by the Arun Valley Line, East Coastway Line, and Oxted Line Capacity | **Railway Reinstatements Package**<br>• Reinstate Uckfield – Lewes – Tunbridge Wells<br>• Develop bus and active travel benefits on former rail routes | • 2 trains per hour (tph) service for Uckfield-Lewes-Tunbridge Wells line stations to London. | • Boosting productivity through better skills matching, knowledge sharing and agglomeration;<br>• Improving transport network efficiency, reliability, and resilience;<br>• Enabling and growing active travel.<br>• Adopting the principles of environmental net gain.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Improving transport network energy efficiency.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Consistently delivering high levels of reliability during normal periods of operation.<br>• Promoting development on and/or near to existing public transport corridors and hubs. | • Boost prosperity for all and reduce the disparity in socioeconomic outcomes. Do so in a sustainable manner, and not at “any cost” to society and the environment.<br>• Protect and enhance the natural and historic environment.<br>• Move to net zero carbon and minimise disruption from climate change.<br>• Strengthen the area’s resilience to external shocks.<br>• Provide the affordable housing the area needs, but in a way that promotes sustainable travel outcomes. |

# Mass Transit Package (2a, 2b and 2c) – Theory of Change Framework

## **Table 2.6:** Theory of Change Framework (Package 2)

| Issues | Inputs | Outputs | Outcomes | Impacts |
|---|---|---|---|---|
| **Global Issues**<br>• Transport is not de-carbonising fast enough<br>• Slower economic growth than neighbouring areas<br>• Need for additional housing with sustainable transport options<br>**Access issues**<br>• Rural communities are being left behind in digital, active travel, and public transport connectivity.<br>• Accessibility challenges, especially for public transport users<br>**Public Transport Issues**<br>• Inadequate mass transit offer<br>• There are gaps in the quality of interurban public transport.<br>• Public transport information and ticketing arrangements are not sufficiently coordinated nor adequately integrated,<br>**Active Travel Issues**<br>• There are significant gaps in regional, national, and international cycle networks in the area.<br>• Active travel mode share is too low for many short journeys in the area. | **Mass Transit Package**<br>• Fastway expansion<br>  • Crawley/Gatwick – Horsham<br>  • Crawley/Gatwick – East Grinstead<br>  • Crawley/Gatwick – Burgess Hill – Haywards Heath<br>  • Crawley/Gatwick – Redhill/Reigate<br>• Rural and interurban bus service improvements<br>• Strategic Mobility Hubs at Three Bridges and North Brighton<br>• Improved Rural Demand Responsive bus/taxi services<br>• Integrated and simpler fares, ticketing, and marketing | • Bus services delivering a "turn-up-and-go" level of public transport service frequencies<br>• Faster mass transit journeys (increasing average speeds from c.8mph to 15mph)<br>• Improvements in the quality of mass transit provision (e.g. accessibility, information, comfort, internet connectivity) | • Boosting productivity through better skills matching, knowledge sharing and agglomeration;<br>• Improving transport network efficiency, reliability, and resilience;<br>• Enabling residents to easily access employment, affordable housing and services – particularly for those who do not have access to a car;<br>• Ensuring that interventions are suitable for all users including the elderly and individuals of reduced mobility and other additional needs.<br>• Adopting the principles of environmental net gain.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Building the right capacity and capability to respond effectively and quickly to external shocks.<br>• Enabling the area's transport systems to recover quickly from disruption.<br>• Promoting development that encourages active travel and public transport over private car.<br>• Promoting development on and/or near to existing public transport corridors and hubs. | • Boost prosperity for all and reduce the disparity in socioeconomic outcomes. Do so in a sustainable manner, and not at "any cost" to society and the environment.<br>• Enable better and more equitable socioeconomic outcomes.<br>• Protect and enhance the natural and historic environment.<br>• Move to net zero carbon and minimise disruption from climate change.<br>• Strengthen the area's resilience to external shocks.<br>• Provide the affordable housing the area needs, but in a way that promotes sustainable travel outcomes. |

# Active Travel Package (3) – Theory of Change Framework

## **Table 2.7:** Theory of Change Framework (Package 3)

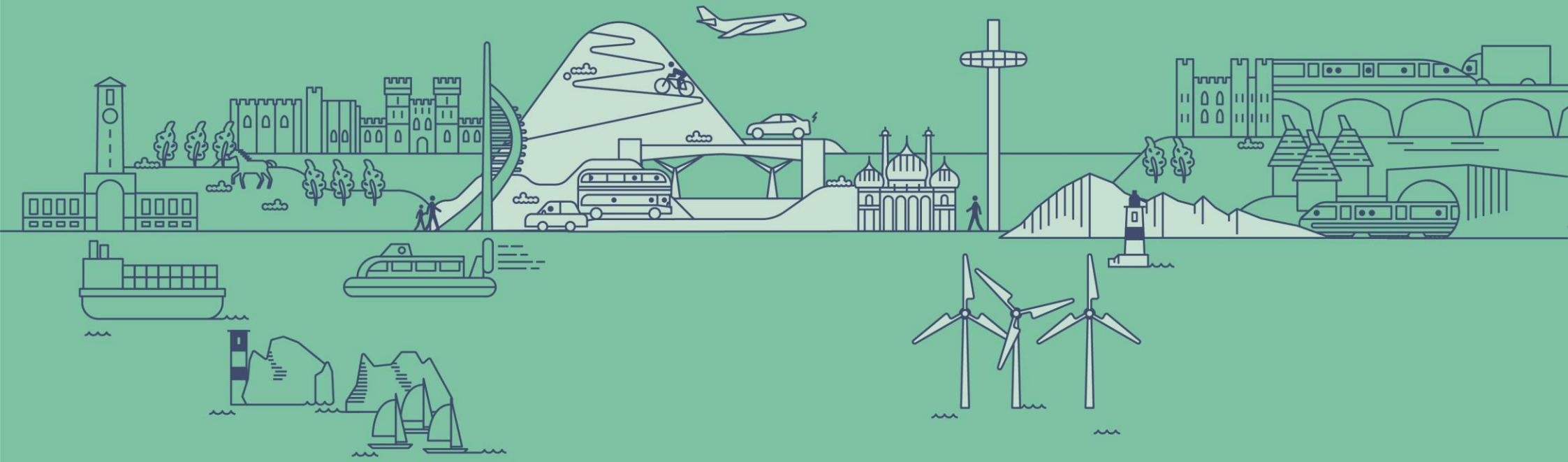
| Issues | Inputs | Outputs | Outcomes | Impacts |
|---|---|---|---|---|
| **Global Issues**<br>• Transport is not de-carbonising fast enough<br>• Slower economic growth than neighbouring areas<br>• Need for additional housing with sustainable transport options<br>**Access issues**<br>• Rural communities are being left behind in digital, active travel, and public transport connectivity.<br>• Accessibility challenges, especially for public transport users<br>**Public Transport Issues**<br>• Inadequate mass transit offer<br>• There are gaps in the quality of interurban public transport.<br>• Public transport information and ticketing arrangements are not sufficiently coordinated nor adequately integrated,<br>**Active Travel Issues**<br>• There are significant gaps in regional, national, and international cycle networks in the area.<br>• Active travel mode share is too low for many short journeys in the area. | **Active Travel Package**<br>• Local and regional cycleways<br>• NCN Crawley – Brighton<br>• NCN Crawley – Chichester<br>• Avenue Verte | • Mode shift from car to active travel, with associated health benefits<br>• Improvements in air quality, particularly in urban parts of the area<br>• Improvements to the urban and rural public realm | • Supporting better place-making and creating new sustainable communities<br>• Enabling residents to easily access employment, affordable housing and services – particularly for those who do not have access to a car.<br>• Ensuring that interventions are suitable for all users including the elderly and individuals of reduced mobility and other additional needs.<br>• Reducing the impact of transport operations on ecosystem services.<br>• Improving public and active transport access to natural, protected, and historic environments.<br>• Adopting the principles of environmental net gain.<br>• Enabling and growing active travel.<br>• Shifting passenger and freight travel from fossil fuel to non carbon emission energy.<br>• Promoting development that encourages active travel and public transport over private car. | • Enable better and more equitable socioeconomic outcomes.<br>• Protect and enhance the natural and historic environment.<br>• Move to net zero carbon and minimise disruption from climate change.<br>• Provide the affordable housing the area needs, but in a way that promotes sustainable travel outcomes. |

# Strategic Highways Package (7) – Theory of Change Framework

## **Table 2.8:** Theory of Change Framework (Package 7)

| Issues | Inputs | Outputs | Outcomes | Impacts |
|---|---|---|---|---|
| **Global Issues**<br>• Slower economic growth than neighbouring areas<br>• Need for additional housing with sustainable transport options<br>**Highways**<br>• There are several congestion, road safety, and air quality "hot spots" in the area, particularly in Town Centres and at major junctions.<br>• The area's major highways do not have enough capacity to accommodate planned housing (and potential airport) growth. | **Strategic Highways**<br>• A23 Junction improvements<br>• M23 Gatwick Access<br>• M23 Redhill New Junction/Link Road<br>• A22 Godstone<br>• A22 Polegate – Hailsham<br>• A22 Smart Road Trial<br>• A2270/A2101 MRN Scheme<br>• A26 Uckfield Bypass<br>• A24 Leatherhead – Horsham<br>• A26 Lewes – Newhaven<br>• A264 Horsham – Crawley<br>• Crawley Western Link Road<br>• A272/A283 AQMAs | • More resilient and reliable highway network<br>• Reduced conflicts between strategic/longer-distance and local traffic<br>• Reduced impact of highways on built up areas including Godstone and Uckfield<br>• Opportunity to expand active travel and mass transit in areas relieved by interventions<br>• Improved access to high growth areas, including Horsham and Crawley | • Boosting productivity through better skills matching, knowledge sharing and agglomeration.<br>• Improving transport network efficiency, reliability, and resilience.<br>• Reducing costs for businesses.<br>• Supporting better place-making and creating new sustainable communities.<br>• Enabling deprived communities to attract investment and achieve more equitable socioeconomic outcomes.<br>• Attracting investment in high growth, high value opportunities.<br>• Adopting the principles of environmental net gain.<br>• Reducing the probability and impact of external shocks disrupting the area's transport networks;<br>• Building the right capacity and capability to respond effectively and quickly to external shocks;<br>• Enabling the area's transport systems to recover quickly from disruption;<br>• Consistently delivering high levels of reliability during normal periods of operation; and<br>• Enabling the economy to grow and diversify enable the area to effectively respond to future economic shocks. | • Boost prosperity for all and reduce the disparity in socioeconomic outcomes. Do so in a sustainable manner, and not at "any cost" to society and the environment.<br>• Enable better and more equitable socioeconomic outcomes.<br>• Protect and enhance the natural and historic environment.<br>• Strengthen the area's resilience to external shocks. |

TRANSPORT FOR THE South East



# Part 3

## Economic Dimension

# Alignment with Department for Transport Business Case Guidance

The table below sets out the DfT's requirements for the Economic Dimension and the level of detail expected at Strategic Outline Case stage. The final column of the table shows where the Economic Dimension addresses each requirement.

| TAG Issue | TAG Requirement | Progress at SOC | Reference |
|---|---|---|---|
| Longlist appraisal | Assess the longlist of options (outlined in the strategic dimension) to a shortlist of options and identify the preferred way forward. | Outline | Part 2e & OAR |
| Methodologies, assumptions and data | Set out the methodologies, assumptions and data that have been used to underpin any transport modelling and appraisal | Outline | Part 3a & Appraisal Specification Report (ASR) & OAR |
| Social cost-benefit analysis of shortlist | Present and explore the main economic costs and impacts associated with the intervention from a UK social welfare perspective | Outline | Part 3a (costs and benefits) & 3b (benefits only) |
| Distributional analysis | Provide distributional analysis to understand the impacts on different social groups | Outline | To be included at further business case stages for specific schemes. Outer Orbital Integrated Sustainability Appraisal (ISA) provides overview of some distributional impacts. |
| Place-based analysis | Conduct place-based analysis where the proposal has geographically focused objectives or where impacts of national-level interventions may differ spatially (where this is proportionate) | Outline | Part 3b, OAR, & ISA<br><br>To be developed further in later business case stages for specific schemes |
| Wider analysis | Include any extra analysis which provides useful insight to inform the decision-making process: this could include analysis of the various options' performance against the SMART objectives at the shortlist stage. This analysis should be proportionate and consistent with the strategic dimension | Outline | Part 3b |
| Value for money | Inclusion of all monetised impacts, non-monetised impacts and sensitivities | Outline | Part 3e |
| Uncertainty analysis | Analyse to understand how changes in different factors affect the value for money of the investment: this should show how likely it is that these changes may happen. | Not Required | N/A |
| Appraisal summary table | Based on TAG guidance | Not Required | N/A |
| Longlist appraisal | Assess the longlist of options (outlined in the strategic dimension) to a shortlist of options and identify the preferred way forward. | Outline | Part 2e & OAR |
| Methodologies, assumptions and data | Set out the methodologies, assumptions and data that have been used to underpin any transport modelling and appraisal | Outline | Part 3a & Appraisal Specification Report (ASR) & OAR |
| Social cost-benefit analysis of shortlist | Present and explore the main economic impacts associated with the intervention from a UK social welfare perspective | Outline | Part 3b |

# Introduction

## Overview of the Economic Case

**The Economic Case presents the economic, environmental and social impacts of the SPOC Packages to inform consideration of value for money. The Economic Case considers the cumulative impacts for the SPOC as a whole, rather than at the individual Package of Interventions level and provides an overview of the most significant findings.**

The Economic Case includes:

- an overview of the approach and the sources of inputs for the assessment;
- assessment findings for the cumulative economic, environmental and social impacts (in comparison to 'Business as Usual') for the summary of Packages of Interventions being considered in the SPOC;
- commentary on the key assessment findings; and
- identification of the areas of greatest uncertainty for the assessment findings.

## Contents

**Part 3a provides an overview of the Package development and assessment approach, which is described in full detail in the OAR.**

This includes:

- the approach for the long-list assessment and an introduction to SEELUM, the land use model used for quantification of impacts;
- the assessment framework applied based on DfT guidance and the Appraisal Specification Report (ASR); and
- identification of the areas of greatest uncertainty for the assessment findings.

**Part 3b provides the findings of the assessment of Economy impacts.**

These address:

- the four sub-impacts for Economy impacts (for business users and transport providers, reliability impact on business users, regeneration impacts, and wider impacts) for the Packages of Interventions, with DfT's Transport Appraisal Guidance (TAG);
- capital cost estimates for the Packages of Interventions (see Part 3a); and
- indirect tax revenues from the SPOC Packages are not assessed at this stage.

**Part 3c provides the findings of the assessment of Environmental impacts.**

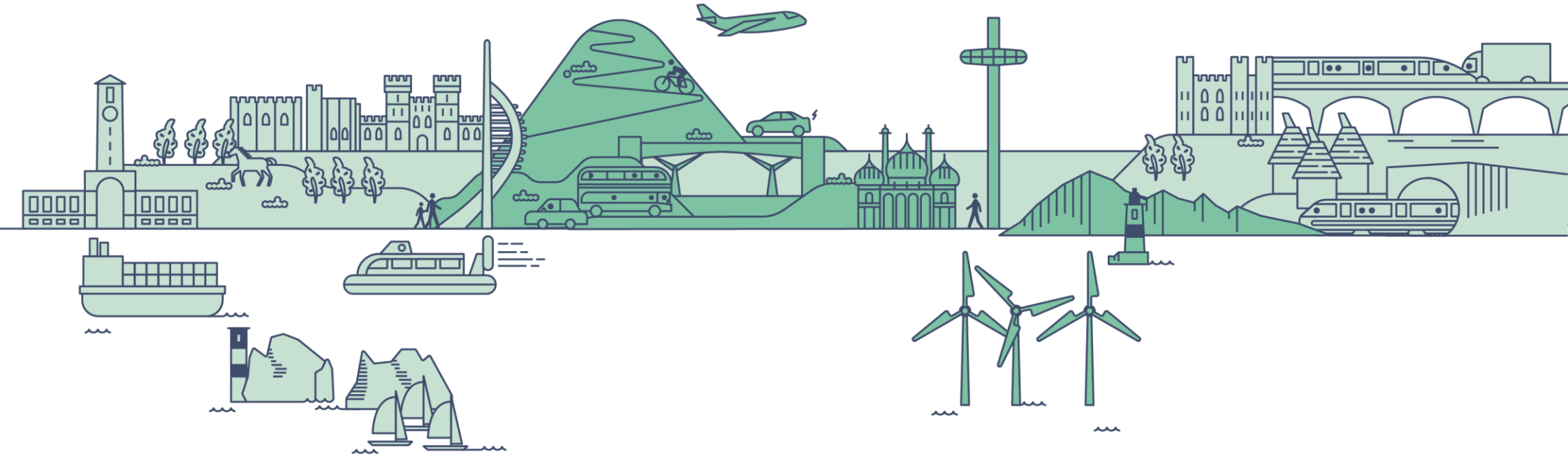
This addresses:

- the eight sub-impacts for Environmental impacts (sub-impacts noise, air quality, greenhouse gases, landscape, townscape, historic environment, biodiversity, and water environment) for the Packages of Interventions, in line with DfT's TAG.

**Part 3d provides the findings of the assessment of Social impacts.**

This addresses

- the ten sub-impacts for Social impacts (sub-impacts for commuting and other users, reliability impact on commuting and other users, physical activity, journey quality, accidents, security, access to services, affordability, severance, and option and non-use values) for the Packages of Interventions, in line with DfT's TAG.



# Part 3a

## Assessment Overview

## Assessment approach

### Long list assessment

A Multi-Criteria Assessment Framework (MCAF) was developed to provide a qualitative assessment of the strategic fit, economic viability, and deliverability of the interventions included in the Long List. The goal was to use the MCAF to sift out interventions that do not perform and to organise and compare options to help develop coherent Packages of interventions.

Each intervention is scored for alignment to national, local and regional policy. Assessment scores for strategic, economic and delivery typology also inform the decision of whether to park or proceed with each intervention. A sustainability assessment of typologies in the Integrated Sustainability Appraisal (ISA) also informs the MCAF scoring of interventions.

A high-level summary of the results of the MCAF can be found in the OAR.

### SEELUM testing

The South East Economy and Land Use Model (SEELUM) tests how investment in transport interventions coupled with changes to land use policy, affects transport outcomes and economic performance.

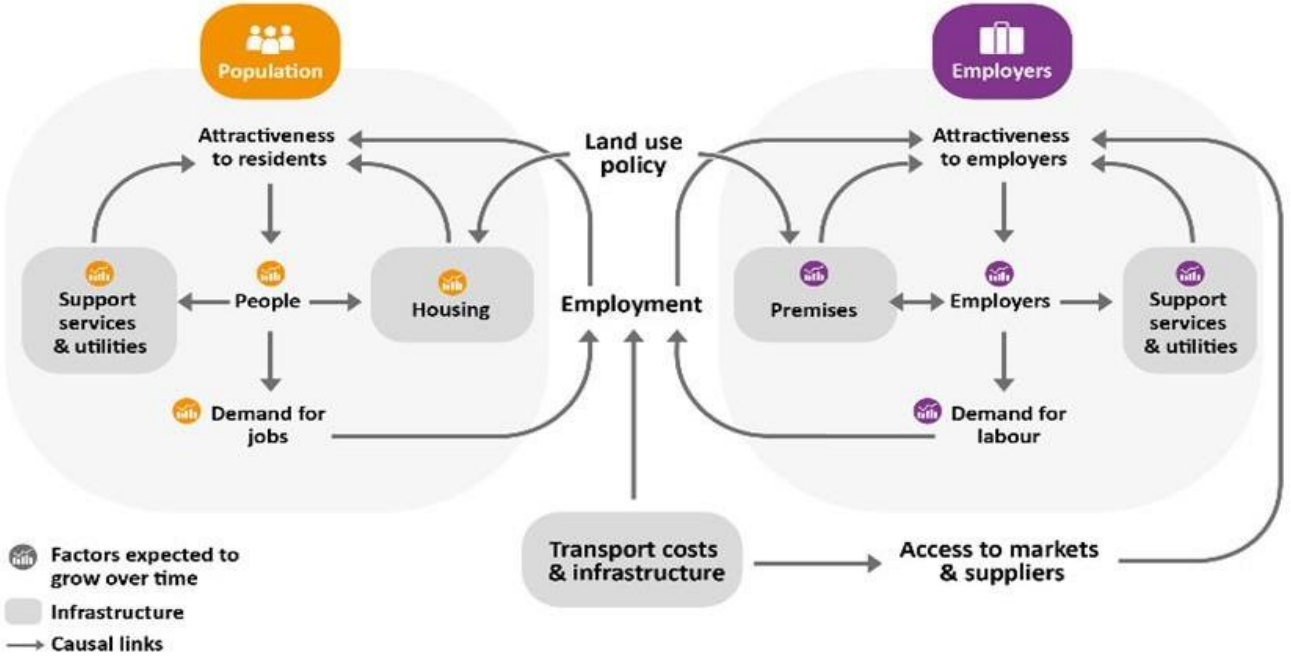
The model simulates how changes in transport connectivity and access affect how attractive zones are for employers and/or households to locate in. It simulates how land use evolves over time (**see Figure 3.1**).

It includes (relatively high-level) internal network models of highways and rail networks. These are used to model the impacts of congestion and crowding on journey times. SEELUM also models the carbon emissions of the highway and railway networks.

To test each Package adjustments are made to: Generalised Journey Times (GJTs) within and between each zone (by mode); and characteristics of links on the highway and railway network (notably capacity).

Each Package is modelled from a base year of 2018 for 32 years to 2050. Results are presented in the Options Assessment Reports (OARs) as a comparison to a Business as Usual (BaU) scenario, which is based on the Department for Transport's National Trip End Model (NTEM) that also projects employment and population growth to 2050.

**Figure 3.1: Schematic diagram of SEELUM's analytical framework**



# SEELUM Results

The table below presents the results of modelling the Placed Based Packages of Interventions for the London to Sussex Coast Area in SEELUM, and are in comparison to the "business as usual" forecasts. The Global Policy Package results are presented for the whole TfSE area in the Strategic Narrative.

| Package | Pop. | New jobs | GVA (£m) | Total $CO_2$ | Car Trips (weekday return) | Rail Trips (weekday return) | Bus, Mass Transit and Ferry Trips (weekday return) | Total Trips (weekday return) | Capital Costs of Construction (£m) |
|---|---|---|---|---|---|---|---|---|---|
| London – Sussex Coast Rail (Core)<br>London – Sussex Coast Rail (R'ment) | 6,250 | 2,350 | 375 | -10,000 | -10,000 | 45,000 | - | 30,000 | 500 |
| London – Sussex Coast Mass Transit | 1,350 | 800 | 100 | -15,000 | -35,000 | - | 60,000 | - | 400 |
| London – Sussex Coast Active Travel | 50 | <50 | 10 | -10,000 | -35,000 | - | -5,000 | - | 1,100 |
| London – Sussex Coast Highways | 700 | 1,350 | 140 | 20,000 | 5,000 | - | - | 5,000 | 1,400 |
| **Combined Package Impacts** | **8,100** | **4,450** | **615** | **-10,000** | **-70,000** | **40,000** | **50,000** | **40,000** | **3,400** |

**Abbreviations**

- MT: Mass Transit
- AT: Active Travel (walking and cycling)

**Reporting units**

- GVA (Gross Value Added) is £millions GVA per annum in 2050 in 2020 prices
- Carbon emissions are $CO_2$ tonnes equivalent
- Changes in trips are weekday return trips
- Capital Costs are "Mid Cost" estimates in 2020 prices, up to and including construction

**Notes**

- **The Combined Impacts results reflect the impacts of all the packages together**, and therefore yield different results to the sum of the individual packages. This reflects displacement effects. For example: an individual may switch from car to bus in response to a MT package, and from car to bike in response to an AT package, but cannot switch to both when both packages are run together.
- The carbon emissions reflect the impact of population and economic growth, as well as changes in the mode and length of trips.
- The mode of the trip shown represents the largest segment of a journey. In reality, a trip by MT is likely to include an AT element (e.g. walking to and from a bus stop).

# Economic Assessment Overview

## Assessment assumptions

**The appraisal approach taken aligns with the DfT's TAG.**

Where benefits are monetised, they are treated in a consistent basis assuming 2021 prices, a 3.5% discount rate to 2021, and market prices through applying a 19% adjustment factor.

All quantified metrics are reported for Year 4 after the introduction of the packages of interventions and 2050. The cumulative impact up to 2050 will also be presented.

Commentary on the key assessment findings and identification of the areas of greatest uncertainty for the assessment findings are also presented.

**Economic impacts**

The four economic sub-impacts are assessed in a combination of qualitative, quantitative and monetary outputs, as specified in Appraisal Specification Summary Table in the ASR.

In line with the DfT's TAG, the economic impacts assessment considered journey time savings and reliability impacts (on business users and transport providers), land use development impacts (regeneration) and workforce and GVA impacts (wider impacts).

Each assessment finding, for each individual Package of interventions, are reported within the OAR. Cumulative economic impacts for the Packages of interventions within this SPOC area are provided at Part 3b.

For regeneration and wider impacts sub-impacts, SEELUM outputs for the change in housing units, employment premises, workforce, and GVA changes.

Capital cost estimates for the Packages of Interventions are provided proportionate to the level of each scheme design.

Indirect tax revenues are not assessed.

**Environmental impacts**

The eight environmental sub-impacts are each assessed qualitatively in the sustainability assessment of typologies.

For greenhouse gas emissions, noise and air quality, SEELUM produces estimates of carbon dioxide emissions and vehicle-kilometre estimates used to provide quantitative and monetary outputs, as specified in the ASR Appraisal Specification Summary Table.

Each these assessment finding, for each individual Package of interventions, are reported within the ISA. These findings are combined to provide the cumulative environmental impacts at Part 3c.

**Social impacts**

Only five of the ten social sub-impacts are assessed at this stage, in a combination of qualitative, quantitative and monetary outputs, as specified in Appraisal Specification Summary Table in the ASR.

The economic impacts assessment considered journey time savings and reliability impacts (on commuting and other users), physical activity, accidents, and access to services. Each of these assessment findings, for each individual Package of interventions, are reported within the OAR.

These findings are combined to provide the cumulative social impacts for the overview of Packages of interventions within this SPOC area at Part 3d.

For physical activity, SEELUM estimates the change in active travel demand and a qualitative assessment is presented. SEELUM's estimate of the change in private vehicle-kilometres will be used to monetise accident savings based upon Marginal External Cost values consistent with DfT guidance.

Distributional Impacts will be assessed at subsequent stages of the business case process in line with the DfT's TAG.

## Uncertainties

**Overview of approach**

The ISA assessment of shortlisted interventions has identified significant uncertainties throughout the analysis, each of which relate to the London to Sussex Sustainability Framework Objectives. A typology assessment has been carried out to identify how each intervention scores against the 13 ISA objectives, results ranged from significant positive effects to uncertain or no effects.

**Economy:**

- There are issues regarding the uncertainty around future demand for and supply of infrastructure, as well as the spatial and temporal distribution of movement.

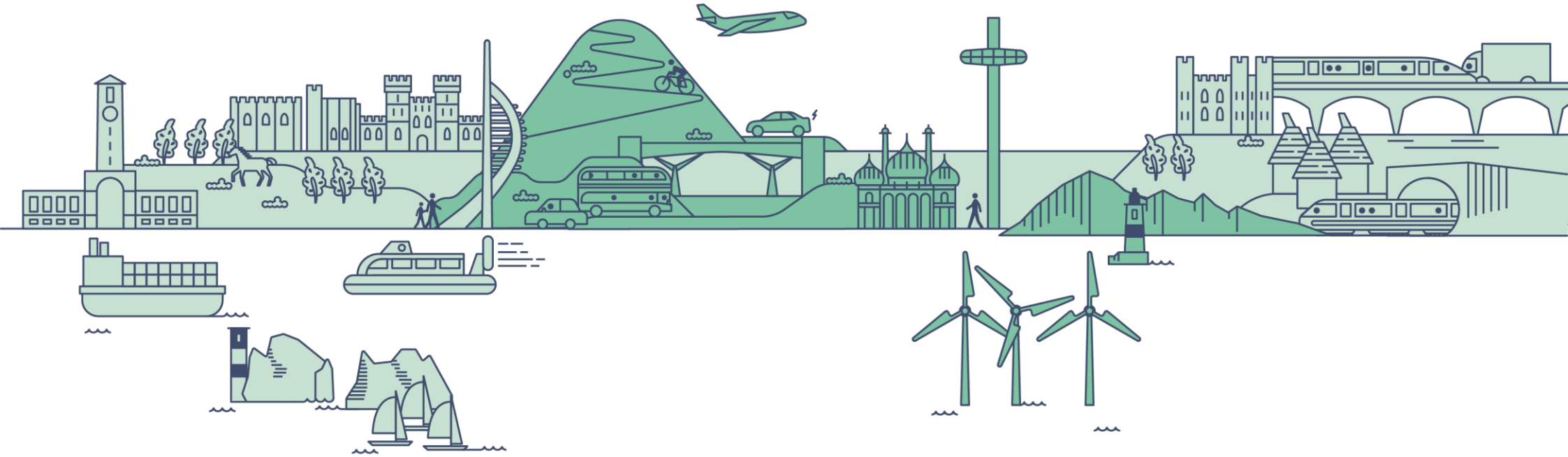
**Environment:**

- The assessment of packages has identified a number of uncertain effects on noise and vibration. There are likely to be negative impacts on noise levels from large road and rail schemes. However, schemes such as active travel may have positive effects on noise levels.
- Uncertainty was generally recorded for soils and resources given that the majority of schemes are likely to result in the use of resources and production and disposal of waste in construction.
- Improvements to rail travel have an uncertain effect upon air quality – emissions will likely increase during construction, but the modal shift to public transport could contribute to improved air quality.
- The assessment of packages has identified uncertain effects regarding biodiversity, natural capital and landscape.

**Social:**

- Although the London to Sussex Coast area faces many social challenges and poor transport connectivity, few uncertainties have been identified regarding social objectives as the interventions promote greater connectivity.

It is important to note that mitigation measures have been proposed with the aim of preventing, reducing or offsetting any significant adverse effect of implementing the proposed interventions. In doing so, monitoring will also manage the uncertainty of proposals and measure the performance of the Packages of Interventions against any environmental objectives.



# Part 3b

## Economic Impacts

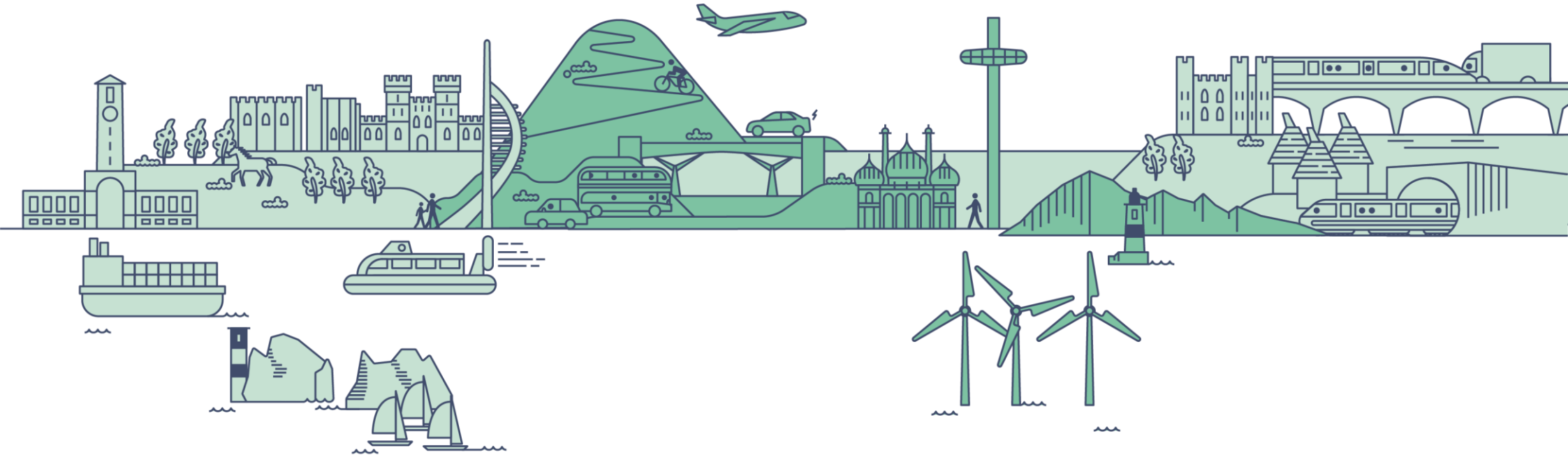
# Summary of Economic Benefits

The Packages of Interventions considered in the SPOC have been assessed against the DfT's Transport Appraisal Guidance Economic sub-impacts. SEELUM modelling outputs provide quantified assessments for journey time impacts on Business Users & Transport Providers, Regeneration and Wider Impacts. A qualitative assessment of the reliability of business users has been determined using findings from the OAR.

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Business Users & Transport Providers** | • The Highways Package delivers a significant boost to GVA (up to £111m per annum) but yields a modest increase in carbon.<br>• By strengthening the resilience of transport networks, and by supporting housing and employment growth, the Highways Package unlocks significant economic benefits.<br>• London to Sussex Coast railway reinstatements will deliver a higher capacity, more resilient, and faster passenger rail service on the Brighton Main Line, Arun Valley Line, and East Coastway Line.<br>• Highway improvements will separate local and strategic traffic leading to reduced congestion, improved connectivity and higher efficiency in the network. These improvements will impact upon the A22, A24, and A26 corridors to strengthen north-south highway resilience. | • Large increase in the number of new rail journeys (driven by mode shift and economic growth) and reduction in car journeys which will reduce congestion and improve journey times.<br>• The scale of GVA uplifts ranges from £270 million for Package 1a (Core Rail) to £9 million for Package 4 (Highways). The Packages combined boost GVA by £495 per annum, which will deliver a more prosperous London to Sussex Coast Area.<br>• Package 4 (Highways) will separate local and strategic traffic movements, reducing congestion and improving journey times within the London to Sussex Coast Area. |
| **Reliability Impact on Business Users** | • The SPOC Packages presented a largely positive impact on reliability as they expand and enhance the Crawley Fastway BRT system, and provide new rail links from Croydon and Tunbridge Wells.<br>• An accessible transport network will enable businesses to trade and compete more effectively in the global marketplace. | • All Packages combined will result in a net change of approximately 70,546 fewer weekday return car trips by 2050. This (in combination with higher quality public transport and active travel infrastructure and services) would lead to significant increases in reliability for all journeys. |
| **Regeneration** | • Enhancements and upgrades to public transport (e.g. journey time savings and increased capacity) will support growth in housing and employment.<br>• Active travel interventions (bike sharing schemes and cycling infrastructure) will uplift the urban and public realm, particularly in the Gatwick Diamond area, improving quality of life and unlocking regeneration opportunities. | • 4,444 additional jobs will be filled and housing for an additional 8,084 people and by 2050 on account of the improvements to the transport network in the London to Sussex Coast area. |

# Summary of Economic Benefits

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Wider and Place Based Impacts** | • A more accessible and reliable transport network will generate additional employment opportunities, particularly in larger urban areas such as Horsham, Brighton and Hove, and Bognor Regis.<br>• Greater connectivity and capacity across the London to Sussex Coast area and the wider SE Region may also help to facilitate increased tourism opportunities, contributing further to the local and regional economy. | • When the Packages are combined, alongside the Global Policy Interventions, they boost GVA by £495m per annum, while delivering a material reduction in carbon emissions.<br>• The Rail (Core) Package will reduce journey times on the Brighton Mainline by 10%, and will generate the largest contribution to GVA growth at £270 million by 2050.<br>• 4,444 additional jobs will be filled and housing for an additional 8,084 people and by on account of the improvements to bus, rail, and highway network – for instance, the reinstatement of two former railways in East Sussex, providing new rail links, will unlock a greater catchment area for employment opportunities.<br>• There is a strong alignment of the location of interventions and those areas with highest levels of deprivation such as Crawley and coastal communities – those most in need of levelling-up.<br>• Unquantified impacts include enhancing local accessibility to employment opportunities and key services, enhancements to public realm and pride in place (along with reduced crime and increased safety, well-being, and health) of left-behind communities. |



# Part 3c

## Social Impacts

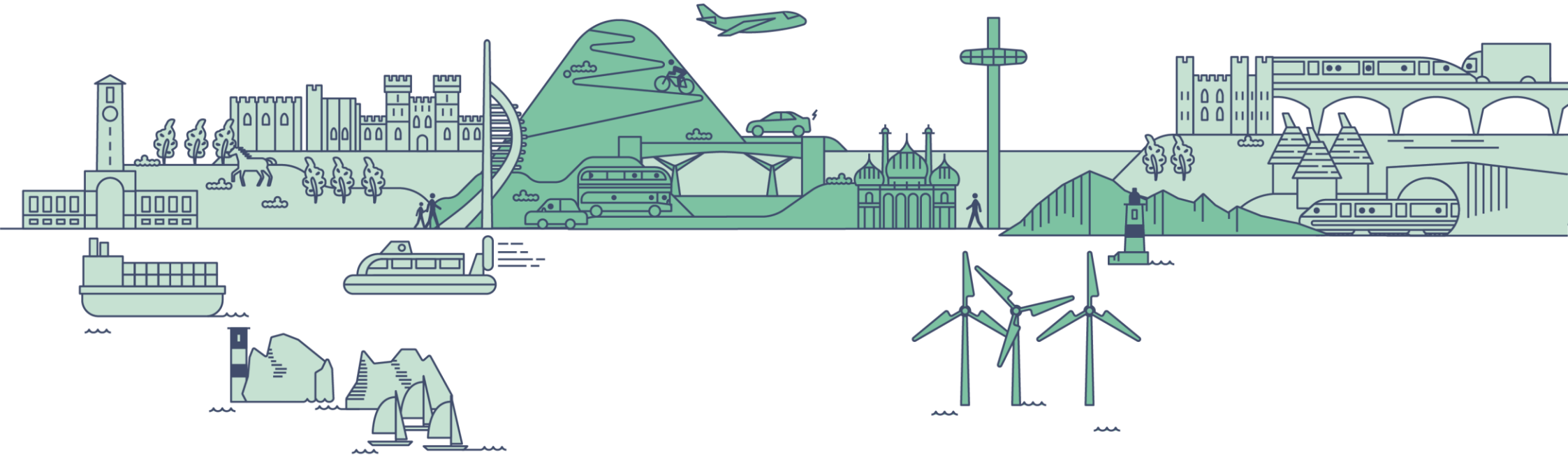
# Summary of Social Benefits

The Packages of Interventions considered in the SPOC have been assessed against five of the DfT's Transport Appraisal Guidance Social and Distributional sub-impacts. SEELUM modelling outputs provide quantified assessments for accidents, physical activity, and journey time impact on Commuting and Other Users. A qualitative assessment of the reliability impact of commuting and other users and access to services has been determined using findings from the OAR.

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Commuting and Other Users** | • London to Sussex Coast Area Mass Transit interventions, the reintroduction of two former railways in East Sussex, and highway upgrades on the A22, A24 and A26 corridors will deliver more frequent services, reduced journey times, greater capacity, and improved connectivity across the transport network.<br>• Improved capacity, service frequencies, interchange and connectivity on the rail network with improved access for communities.<br>• Highway improvements will separate local and strategic traffic leading to reduced congestion, improved connectivity and higher efficiency in the network. These improvements will impact upon the A22, A24, and A26 corridors to strengthen north-south highway resilience. | • Across all SPOC Packages, it is estimated that there will be 70,000 fewer return car journeys by 2050. Therefore, commuting journeys could become more seamless as the interventions alleviate traffic congestion.<br>• Package 4 (Highways) will separate local and strategic traffic movements, reducing congestion and improving journey times within the London to Sussex Coast Area. |
| **Reliability Impact on Commuting and Other users** | • The SPOC packages present a largely positive impact on reliability as they would provide high-quality and reliable bus, rail, and highway networks. Specifically, The Crawley Fastway expansion will deliver improvements to reliability, speed, and frequency of services.<br>• An accessible transport network will provide reliable access for residents to employment, education, healthcare and leisure. | • All Packages combined will result in a net change of approximately 70,000 fewer weekday return car trips by 2050. This (in combination with higher quality public transport and active travel infrastructure and services) would lead to significant increases in reliability for all journeys. |
| **Physical Activity** | • The Packages combined result in an increase in bus, rail, and walking trips, each of which support a modal shift away from private car use. As a result, public transport encourages walking/cycling trips which could have beneficial effects on physical activity and associated health benefits.<br>• With the exception of active travel options, highway development will encourage continued reliance on private car use. For instance, the addition of Junction 8a along the M23 will increase car use in the area. However, junction improvements may also ease congestion and reduce the number of accidents on the network long-term. | • The Active Travel interventions will result in 35,000 fewer return car trips per typical weekday by 2050.<br>• Significant mode shift from car to active travel will generate associated health benefits. |

# Summary of Social Benefits

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Accidents** | • The modal shift from car to public transport and active travel has the potential to reduce the risk of major road casualties.<br>• New road and highway developments are built to high standards of safety. | • 210,000 fewer vehicle kilometres a day as a result of all packages in 2050 compared to Business as Usual.<br>• Qualitative assessment as accidents / collisions resulting in KSIs reduced. |
| **Access to Services** | • Improved connectivity to the public transport network will particularly benefit those without access to a private car.<br>• Improved access to services will connect individuals within the London to Sussex Coast Area to a wider range of jobs, services and facilities.<br>• The interventions have generally resulted in positive effects on social objectives.<br>• The Public Transport interventions included in Package 2 reduce fares, thus improving access for lower income groups. The interventions also include additional rural services allowing increased access to rural communities.<br>• However, the use of any new road infrastructure will largely depend on access to private car, so is unlikely to benefit all sectors of society. | • The Rail (Core) Package will reduce journey times on the Brighton Mainline by 10%. |



# Part 3d

## Environmental Impacts

# Summary of Environmental Benefits

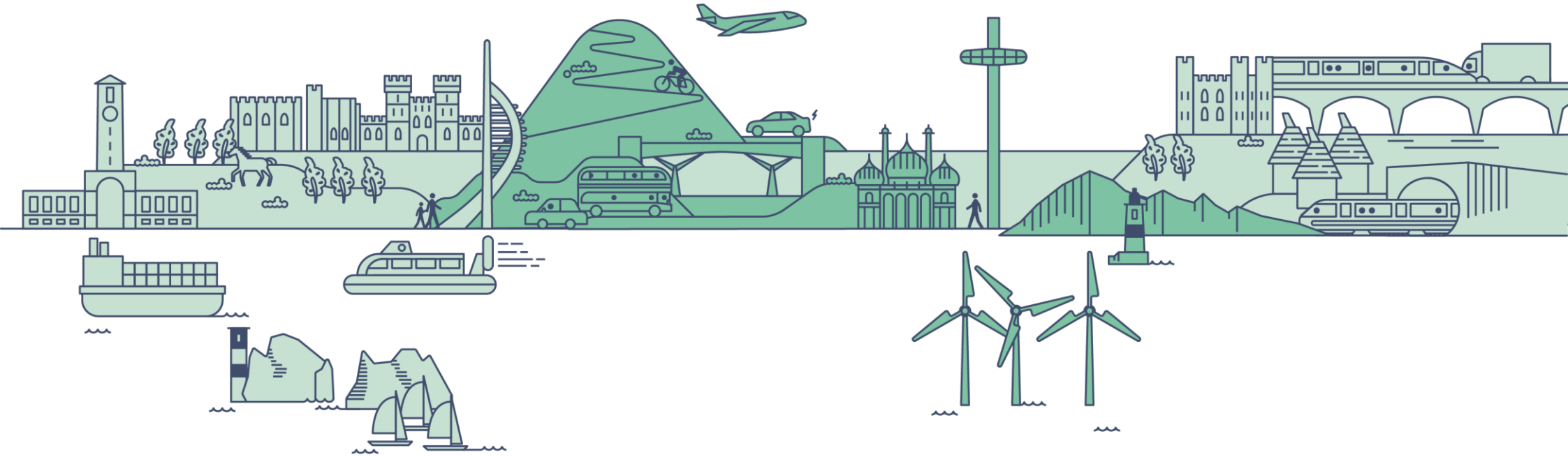
| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Noise** | • The A23/A27 Patcham Junction Mobility Hubs intervention is likely to result in minor negative impacts for noise given the intervention's location within a road Noise Important Area (NIA), with scheme construction contributing to increased noise upon sensitive receptors.<br>• The Gatwick Diamond BRT Crawley-Horsham, Crawley-East Grinstead and Crawley to Haywards Heath options are likely to result in improvements to overall traffic noise, through reductions in private car use.<br>• All active travel interventions, namely the increased availability of cycleways, will likely reduce traffic related noise levels. Once operational, active travel interventions will likely reduce noise levels due to the potential modal shift away from car travel.<br>• However, upgrades to M23 Junction 9 will likely result in negative effects upon noise due to the construction works, as well as increased traffic flows likely to utilise the improved junction. | • Together, the Packages will help to encourage a modal shift, leading to reductions in noise pollution from the transport network. The introduction of Package 3 (active travel) could bring about 40,000 additional active travel trips (walking and cycling), therefore this will contribute to improved noise levels in the London to Sussex Coast Area. |
| **Air Quality** | • Mass transit interventions (e.g. The Three bridges Strategic Mobility Hub) will witness a reduction in vehicle travel and single occupancy journeys, which in turn will help to decrease air pollution through reduced levels of congestion.<br>• The assessment of the packages impact on air quality and greenhouse gas emissions has identified a clear conflict between the typologies. Those options that support active travel, smart motorways, support of public transport and AQMAs, will help encourage a modal shift, leading to reductions in air pollution from the transport network. However, the construction of large road schemes and new highways could increase uptake of vehicular traffic which could lead to negative cumulative effects in some areas within the SCR. These projects will also have large qualities of embodied carbon associated with them.<br>• Improvements in air quality within the London to Sussex Coast Area will result in beneficial impacts on population within the area, particularly for those who are older, younger and suffering from respiratory illnesses. Further, improved air quality will make walking or cycling more attractive for shorter journeys. | • The SPOC Packages combined will result in 70,000 fewer weekday return car trips by 2050.<br>• The Mass Transit Package delivers transformational growth in bus journeys, resulting in approximately 40,000 fewer return car journeys each weekday. In turn, a significant reduction in carbon emissions is achieved – 15,000 less tonnes of $CO_2e$ emissions a year by 2050. |

# Summary of Environmental Benefits

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Greenhouse Gases** | • Improvements to the active travel network (e.g. Burgess Hill/Haywards Heath Local Cycleways) will support a modal shift away from private car use and single occupancy journeys, thus providing a decrease in overall GHG emissions – the Active Travel Package will save 10,000 tonnes $CO_2e$ in 2050.<br>• Almost all interventions will incur significant GHG emissions through the carbon associated with the construction, maintenance, and operation of the project. | • The Active Travel Package will boost cycling and walking by 3.5% and encourage mode shift from car to active travel modes. This Package will result in a significant contribution towards reducing carbon emissions and improving local air quality levels in the London to Sussex Coast Area.<br>• Combined Global Policy Interventions deliver significant reductions in carbon emissions. |
| **Landscape** | • The London to Sussex Coast Area boasts varied landscapes and is home to 8 different National Landscape Character Areas.<br>• The M23 New Junction 8a is located close to valuable landscape assets that may potentially have their views and nature obscured by a new road junction.<br>• The historic environment, landscapes and tranquillity are under pressure from development throughout the SCRSA. | • The interventions are constrained by the sensitive or protected nature of environments such as the North and South Downs National Parks. The location of the A23/27 Patcham Junction Mobility Hub is within the South Downs National Park and may therefore affect the natural landscape of the area, particularly during construction. |
| **Townscape** | • There is potential for negative cumulative effects on townscape if multiple large scale road schemes (such as A272 Crawley Western Link Road and M23 new junction M8a), were to come forward.<br>• Railway and highway developments will negatively affect elements of townscape character due to the associated impacts from additional lighting, street fixtures and maintenance equipment.<br>• The Gatwick Diamond freight consolidation centre will likely improve the townscape by reducing unnecessary freight movement, while also utilising existing infrastructure in the area to develop the consolidation centre. | • The active travel options presented throughout the SPOC Packages will result in 35,000 fewer weekday return car trips in 2050, therefore improving the city's townscape through a mode shift from car to active travel. |

# Summary of Environmental Benefits

| Sub-impacts | Summary of Packages | Assessment Outputs |
|---|---|---|
| **Heritage of Historic Resources** | • The London to Sussex Coast Area is home to World Heritage Sites, Battlefields, Listed Buildings and Monuments. There are opportunities to protect and enhance historic environments through improved design and landscaping.<br>• The assessment of interventions has resulted in mixed or negligible effects on the historic environment. The construction of new infrastructure projects are likely to disrupt the historic environment, particularly in areas of high heritage value (such as Lewes and Brighton).<br>• However, the reduction in noise pollution from lower levels of traffic in some areas could result in increased tranquillity, contribute to overall sense of place and the unique setting of heritage assets. | • The proposed A272 Crawley Western Link Road is likely to result in the degradation of heritage assets, as several scheduled monuments are located close to the intervention. Therefore, insensitive design and land take could result in negative effects on these designated heritage assets. |
| **Biodiversity** | • Several interventions have resulted in significant negative effects on biodiversity.<br>• Active travel schemes have potential positive effects on biodiversity, as they could also be designed to enhance the biodiversity value, e.g., through incorporation of planting.<br>• Several SPOC Packages have the potential to reduce the numbers of cars on highways in close proximity to environmental protected areas, reducing noise and vibration habitat disturbance and generating positive impacts upon biodiversity and natural capital by limiting the levels of transport disturbance to protected areas across the SCRSA. | • The Three Bridges Strategic Mobility Hub has resulted in negative impacts upon biodiversity due to the proximity of the intervention to ancient woodland and other priority habitats, risking damage during construction. Careful design will be needed to ensure that infrastructure required for this option doesn't result in degradation and disturbance of these significant sites and the unique habitats and species that reside within them. |
| **Water Environment** | • Several interventions have resulted in significant negative effects on the water environment. Specifically, The Uckfield – Lewes new railway intervention may result in negative effects on the water environment due to its<br>• There is potential for highway improvements to provide the opportunities to improve existing drainage network, reducing polluted run-off and potential for contamination. | • Large scale road schemes and large scale rail schemes have potential to increase surface water runoff and flood risk, particularly from physical alteration as a result of development. |



# Part 3e

## Conclusion and Value for Money Statement

# Conclusion and Value for Money Statement

The SPOC Packages will deliver an efficient, multi-modal transport system that will transform travel in the SPOC area. The impacts of the SPOC Packages support the delivery of the strategic objectives outlined here.

**Climate Change**

- Most interventions are likely to result in an increase in GHG emissions through the carbon associated with the construction, maintenance and operation of interventions. However, the improvement of the rail and bus network could reduce GHG emissions over their operational lifecycles and encourage modal shift towards public transport.
- Mode shift from car to active travel modes will result in a significant contribution towards reducing carbon emissions and improving local air quality levels.
- Combined Global Policy Interventions deliver significant reductions in carbon emissions.
- The transport network will be more resilient to climate events such as flooding, high temperatures, droughts and storms.

**Reliability and Resilience**

- An expanded and improved public transport network, with reduced congestion through mode shift and highway improvements, and will provide a more consistently high level of reliability during normal periods of operation.
- Considerate design will be observed in the SPOC Packages to address both the major and acute impacts of climate change such as flooding or severe weather.
- A strengthened transport network that recovers quickly from disruption will support improved reliability and journey experience for users.

**Sustainable Integrated Planning**

- An expanded and improved public transport network offering improved connectivity to employment, education, healthcare and leisure opportunities will promote development on and/or near to existing and new public transport corridors and hubs.
- Improved active travel and public transport networks will promote development that reduces the need for residents to travel long distances to access employment, education, services, and transport hubs.
- Improved active travel and public transport networks will promote development that encourages active travel and public transport over private car.

**Economy**

- Upgrades to the public transport network within the London to Sussex Coast area will unlock access to an enlarged labour market and increased agglomeration.
- In turn, greater access and connectivity to the London to Sussex Coast area could facilitate tourism opportunities, which will further boost the local and regional economy.

**Society**

- The SPOC Packages have the potential to support better placemaking. This will be achieved by reducing the number of cars on the road, improving levels of congestion, and reducing noise and air pollution levels.
- All Packages will connect communities to a wider range of jobs, services and facilities both within and outside of the study area. This will particularly benefit those without access to a private car.

**Natural and Historic Environment**

- All packages will adopt the principles of environmental net gain through their design development.
- Several interventions are located in close proximity to some of the county's most sensitive natural environments.
- Considerate design is observed in the SPOC packages to avoid disturbance or damage to protected sites such as the South Downs National Park.

# Conclusion and Value for Money Statement

**Value for Money Statement**

- The value for money for the packages will consider the strategic fit and the quantified economic appraisal results. The quantified economic results are likely to vary widely between different types of schemes, but as a whole the SPOC is anticipated to represent value for money and to support the region in delivering across a number of policy ambitions.
- In addition to the monetised benefits captured above, the SPOC Packages are anticipated to result in a range of social benefits. The interventions will provide sustainable public transport alternatives, in turn reducing congestion and traffic delays which will improve the quality of life for residents within the Solent and Sussex Coast Area and achieve transport equality.
- There are likely to be several net environmental disbenefits as a result of the scheme. Noise, GHG emissions and air quality are likely to worsen during the construction stages of large-scale road and rail projects. However, it is important to consider the long term gains in generating a significant shift from private car use to public transport which supports environmental objectives.

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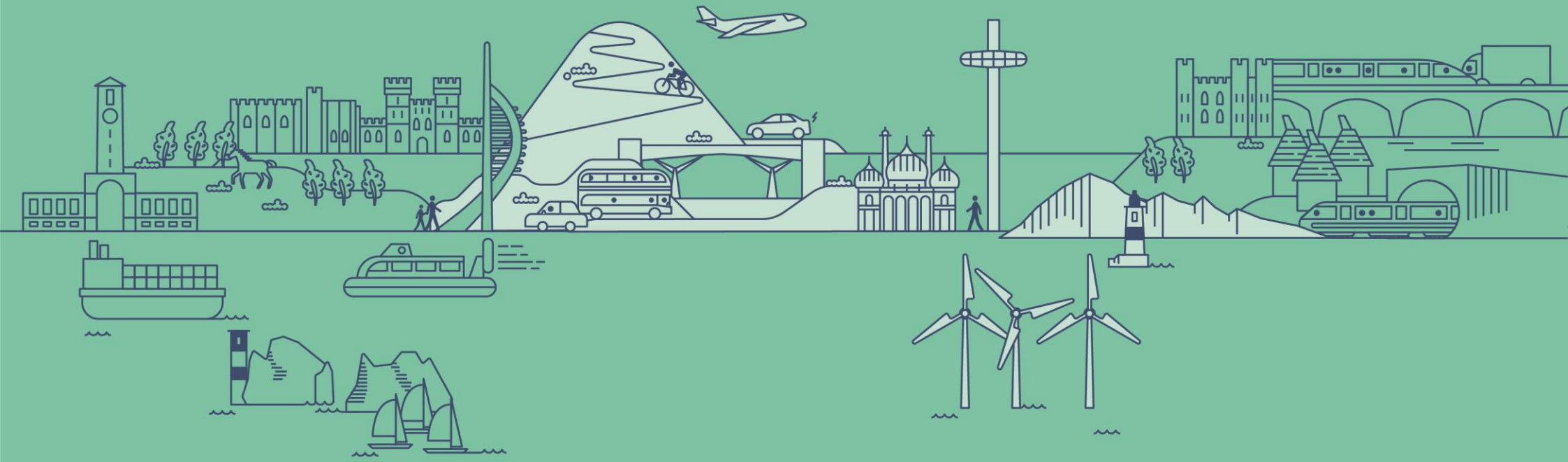


# Part 4

## Financial Dimension

# Introduction

## Overview of the Financial Dimension

**The Financial Dimension considers the affordability of the Packages for the London to Sussex Coast Area.**

The Financial Dimension includes:

- capital funding requirements;
- maintenance and renewal funding requirements; and
- affordability considerations.

## Contents

**Part 4a sets out the indicative funding requirement for the SPOC Packages.**

It presents:

- an overview of the cost estimation approach and key assumptions;
- the capital cost estimate for all of the Packages of Interventions; and
- maintenance and renewal estimates

**Part 4b outlines affordability considerations.**

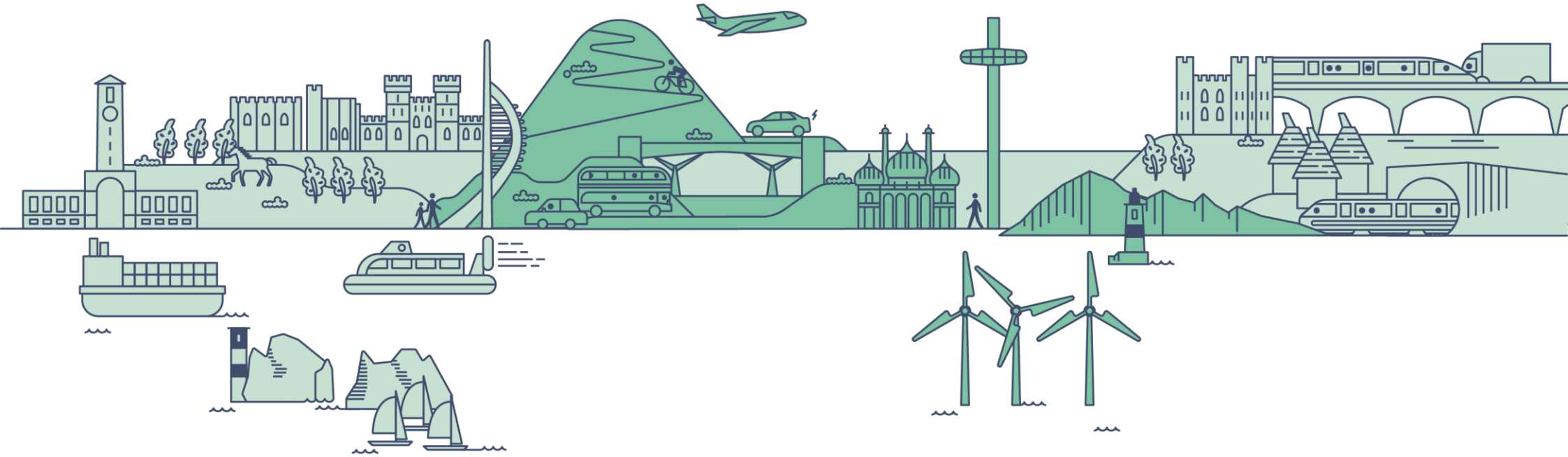
It sets out:

- considerations for funding and financing the package; and
- potential spend profile.

# Alignment with Department for Transport Business Case Guidance

The table below sets out DfT's requirements for the Financial Dimension and the level of detail expected at Strategic Outline Case stage. The final column of the table shows where the Financial Dimension addresses each requirement.

| TAG Issue | TAG Requirement | Progress at SOC | Reference |
|---|---|---|---|
| Introduction to affordability | Outline the approach taken to assess affordability | Outline | Part 4b |
| Budgets and funding cover | Provide analysis of the budget and funding cover for the proposal: set our, if relevant, details of other funding sources | Outline | Part 4b |
| Costs | Provide details of the expected whole life costs, when they'll occur, breakdown and profile of costs by those parties on whom they fall, and any risk allowance required. | Outline | Part 4a & 4b |
| Accounting implications | Describe the expected impact on the organisation's balance sheet | Not Required | N/A |



# Part 4a

## Funding Requirement

# Capital Costs

## Overview

The capital cost estimates have been prepared to a level of detail commensurate with the maturity of the design of the interventions.

Items and quantities have been priced using either published costs or built up based upon industry standard rates.

Where intervention estimates have been built up, percentage allowances have been added for design fees, STATS and land costs.

To reflect the maturity of the design a risk allowance has been applied.

All estimates have a base year of 2020.

The maintenance and renewal estimates are based on an allowance of the capital cost estimate.

Capital cost estimates for the interventions are based on current published OAR, SOC, OBC and FBC estimates where these exist and have been located.

Those interventions that have no published cost information available have had their construction costs built up based on type of intervention (rail, MRT, highways, active travel and placemaking), high level scope (route lengths, number of stations, allowances for structures, major junction improvements etc), location (urban or rural), nature (standard or high spec/'statement' intervention, all new or upgrades).

The resulting items and quantities have been priced using historic project data and industry standard published data, with cognisance made of the location and nature of the intervention. Allowances have been made for main contractor's preliminaries and overhead and profit on the same basis.

Percentage allowances to cover for professional/client fees, STATS and land costs have been applied to the construction costs at levels based on amounts allowed for generally in business cases and from experience in working on rail and highway schemes with Network Rail and National Highways.

## Risk

To reflect the lack of maturity of the design on which these 'bottom up' estimates are based, risk allowances have been applied at levels commensurate with SOC estimates, informed by TAG as follows detailed in the table below.

| Mode | Allowance | Rationale |
|---|---|---|
| Rail and Mass Rapid Transit | 56% | Latest TAG (as of May 2021) SOC level OB for rail – Considered to be similar for MRT |
| Highways and Active Travel | 46% | Latest TAG (as of May 2021) SOC level OB for roads |
| >£250m and complex schemes | 200% | Supplementary Green Book Guidance on OB - upper value for development |

## Price Ranges

Estimates have been presented as low, medium and high range of costs. This reflects a level of uncertainty in cost estimating accuracy, due to the lack of maturity of the design for many schemes, but these are typically +/- 10-15% in relation to the medium cost.

# Capital Costs

## Nominal costs

Construction inflation in the period 1990 - 2020 averaged 3% (compound) per annum (according to BCIS Road Tender Indices).

Based upon the assumed delivery programme for the interventions and packages of interventions forecast construction inflation has been applied at an annual 3% compound interest to the 2020 capital cost estimates (medium) for each intervention to the final year of construction (opening year).

## Example cost calculation based on rates

As mentioned above, where capital costs were not available from published sources, such as OAR, SOC, OBC and FBC, estimates were calculated based upon rates of the type of intervention.

Estimates also allowed for Indirect Construction Costs, Project Design Team Fees, and Risk.

An example is provided to the right.

| Ref | Description | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | **Direct Construction Works** | | | | |
| | | | | | 0.00 |
| | New four platform station west of the current stat | 1.00 | | 2,500,000.00 | 2,500,000.00 |
| | | | | | 0.00 |
| | over bridge | 1.00 | | 650,000.00 | 650,000.00 |
| | | | | | 0.00 |
| | Decommission old station | 1.00 | | 2,200,000.00 | 2,200,000.00 |
| | | | | | 0.00 |
| | Resignalling | 1,000.00 | m | 1,000.00 | 1,000,000.00 |
| | Passing Loops | 400.00 | m | 5,000.00 | 2,000,000.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | **TOTAL DIRECT CONSTRUCTION COSTS:** | | | | **8,350,000.00** |
| | **ADD** | | | | |
| 2 | **Indirect Construction Costs** | | | | |
| 2.01 | Preliminaries | | | 20% | 1,670,000.00 |
| 2.02 | Overheads and Profit | | | 6% | 601,200.00 |
| | **ADD** | | | | **2,271,200.00** |
| 3 | **Project/Design Team Fees and Other Project Costs** | | | | |
| 3.01 | Design Team Costs | | | 10% | 835,000.00 |
| 3.02 | Project Management Team Costs | | | 15% | 1,252,500.00 |
| 3.03 | Other Project Costs | | | | |
| | | | | | **2,087,500.00** |
| | **ADD** | | | | |
| 4 | **Risk** | | | | |
| 4.01 | Total Risk Allowance | | | 56% | **7,116,872.00** |
| | | | | | |
| | | | | | |
| | | | | | **19,825,572.00** |

# Capital Costs

## The Table below presents the Capital Cost Estimates for the London to Sussex Coast Packages.

| Package Description | Low Cost (£m, 2020 prices) | Mid Cost (£m, 2020 prices) | High Cost (£m, 2020 prices) |
|---|---|---|---|
| London to Sussex Coast Rail (Core)<br>London to Sussex Coast Rail (R'ment) | 450 | 500 | 550 |
| London to Sussex Coast Mass Transit | 350 | 400 | 400 |
| London to Sussex Coast Active Travel | 1,000 | 1,100 | 1,200 |
| London to Sussex Coast Highways | 1,400 | 1,600 | 1,800 |
| **Total London to Sussex Coast** | **3,200** | **3,600** | **3,900** |

# Maintenance and Renewals

## Maintenance and Renewals

Having reviewed historical data of similar types of schemes, maintenance and renewals average circa:

- 2.56% of capital costs for rail, over a 30-year period.

This is made up of a typical rate of:

- 0.08% per year for maintenance
- + 0.1% in year 20 for renewal
- + 0.16% in year 30 for a further renewal

7.5% of capital costs for MRT, active travel and highways, over a 30-year period.

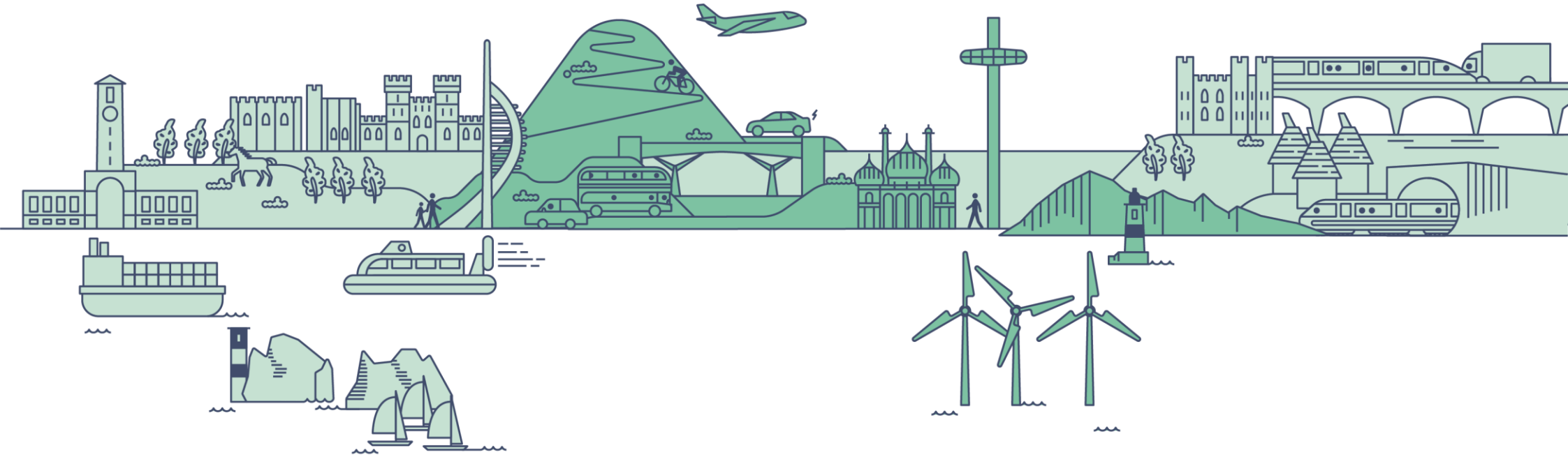
This is made up of a typical rate of:

- 0.1% per year for maintenance
- + 1.5% in year 20 for renewal
- + 3% in year 30 for a further renewal

The table shows a flat rate of 2.56% and 7.5% respectively applied against the 2020 base price of each package of interventions.

Annual maintenance and renewal cost estimates for the London to Sussex Coast Packages are presented in the table to the right.

| Package Description | Mid Cost (£m, 2020 prices) |
|---|---|
| London – Sussex Coast Rail (Core) | 15 |
| London – Sussex Coast Rail (R'ment) | |
| London – Sussex Coast Mass Transit | 30 |
| London – Sussex Coast Active Travel | 88 |
| London – Sussex Coast Highways | 120 |
| **Total London Sussex Coast** | **245** |



# Part 4b
## Affordability

## Funding Sources

**There are a number of funding sources to potentially support infrastructure investment in the South East.**

These funding sources, identified below, vary in the likely amount of funding they will generate and the challenges associated with their implementation. Additionally, new funding sources may emerge in response to environmental, economic and social changes over the life of TfSE's Transport Strategy.

Potential funding sources include:

- Central Government funding, e.g. Housing Infrastructure Fund, Transforming Cities Fund
- Rail Enhancement/Renewals funding, e.g. Rail Network Enhancements Pipeline
- National Roads Fund, e.g. Roads Investment Strategy, Major Road Network
- Third party contribution, e.g. from major private sector investors, land/asset owners, and developers
- Local rates/levies, e.g. Work Place Parking Levy, Business Rate Supplement

## Affordability

**To afford the identified cost of the proposed packages a range of funding and financing sources will be required.**

A large proportion of this funding should be secured from local sources, with the funding strategy seeking to capture part of the value from the investment that accrues to a range of local beneficiaries.

The development of the funding strategy will therefore consider ways of capturing the uplift in benefits enabled by the interventions as this will reduce reliance on the public purse. Capturing these benefits to generate funding for transport infrastructure can be achieved by developing an appropriate funding package.

Currently, TfSE do not have the powers to raise funding. Dependent on the level of devolution granted by central government, TfSE could gain these powers, as well as utilising the powers available to local councils and authorities that are partners to TfSE.

Given the scale of investment proposed and the range of transport infrastructure interventions, a portfolio of funding sources will be required reflecting the nature of beneficiaries and the criteria for the funds.

An additional potential funding source will be farebox revenue from the surplus from public transport services, once operating costs are met.

TfSE would not collect these additional funds themselves so they would be required to work with local transport providers to understand if this is a viable funding mechanism for transport infrastructure improvements.

# Developing the Indicative Spend Profile

An estimated total implementation time was calculated using sub-categories of intervention displayed on the table overleaf.

## Current Stage

Stages of scheme development for each intervention type are identified below and used in the table overleaf. The project stages used were:

- Pre-SOBC (Preparation for the Strategic Outline Business Case
- SOBC (Strategic Outline Business Case)
- OBC (Outline Business Case
- FBC (Full Business Case)
- Pre-DCO (Development Consent Order) / PI (Public Inquiry)
- DCO (Development Consent Order) / PI (Public Inquiry)
- Delivery (or construction / implementation)

Where information on the project stage was missing or clearly in a very early concept stage, the intervention was assumed to be at the Pre-SOBC stage.

For smaller or simpler interventions, not all stages may be required.

## Implementation Time

The total implementation time assumptions for each of these range from 0-2 years for an active travel service improvement to 15-20 years for a new offline rail infrastructure scheme (see table overleaf).

If there was published information for a particular intervention on the construction start year, end year and/or construction duration then this was applied instead of the assumed construction time.

## Phasing

A high level forecast was also calculated, categorising the schemes into:

- Short-term
- Medium-term
- Long-term

Short-term schemes were judged to have a construction start date in 2030 or before. Medium-term schemes were judged to have a construction start date between 2031 and 2040. Long-term schemes were judged to have a construction start date 2041 onwards.

For the spend profile, an even distribution of was assumed between the construction start year and construction end year for each intervention. The total for all the interventions in that year provides the total construction spend estimated for each particular year.

As only a small proportion of total capital spend takes place prior to construction, all capital spend were assumed to be incurred during construction.

# Developing the Indicative Spend Profile

## Indicative timescales for different intervention categories

| Category | Sub-Category | Time | Max Years | Pre-SOBC | SOBC | OBC | FBC | Pre-DCO/PI* | DCO/PI* | Delivery |
|---|---|---|---|---|---|---|---|---|---|---|
| Rail | Rail - New Offline Rail Infrastructure | 15-20 years | 20 | 20 | 15 | 12 | 10 | 8 | 6 | 5 |
| Rail | Rail - New Online Rail Infrastructure | 5-10 years | 10 | 10 | 7 | 6 | 5 | 4 | 3 | 2 |
| Rail | Rail - Service Improvement | 0-7 years | 7 | 7 | 5 | 4 | 3 | N/A | N/A | 1 |
| Rail | Rail - Reinstating Line | 10-15 years | 15 | 15 | 12 | 10 | 8 | 7 | 5 | 4 |
| Rail | Rail - Level Crossing Removal | 5-7 years | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Mass Rapid Transit | MRT - New BRT/MRT | 5-10 years | 10 | 10 | 7 | 6 | 5 | 4 | 3 | 2 |
| Mass Rapid Transit | MRT - New Ferry/Waterway | 5-8 years | 8 | 8 | 6 | 5 | 4 | N/A | N/A | 2 |
| Mass Rapid Transit | MRT - Service Improvement | 0-5 years | 5 | 5 | 4 | 3 | 2 | N/A | N/A | 1 |
| Mass Rapid Transit | MRT - New Strategic Mobility Hub | 3-5 years | 5 | 5 | 4 | 3 | 2 | 2 | 1 | 1 |
| Mass Rapid Transit | MRT - Infrastructure Improvement | 3-5 years | 10 | 10 | 8 | 7 | 6 | N/A | N/A | 1 |
| Active Travel | Active Travel - New Cycleway/Footways | 2-5 years | 5 | 5 | 4 | 3 | 2 | N/A | N/A | 1 |
| Active Travel | Active Travel - Improved Cycleways/Footways | 1-3 years | 4 | 4 | 3 | 2 | 1 | N/A | N/A | 1 |
| Active Travel | Active Travel - Service Improvement | 0-2 years | 4 | 4 | 3 | 2 | 1 | N/A | N/A | 1 |
| Active Travel | Active Travel - Mobility Hubs | 2-3 years | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 |
| Active Travel | Active Travel - Online Road Improvements | 2-3 years | 3 | 3 | 3 | 3 | 2 | N/A | N/A | 1 |
| Active Travel | Active Travel - Offline Road Improvements | 3-5 years | 5 | 5 | 4 | 3 | 3 | 2 | 1 | 1 |
| Highways | Highways - Junction Improvement | 3-5 years | 5 | 5 | 4 | 3 | 3 | 2 | 1 | 1 |
| Highways | Highways - Widening | 3-5 years | 5 | 5 | 4 | 3 | 3 | 2 | 1 | 1 |
| Highways | Highways - New Online Infrastructure Improvement | 3-5 years | 5 | 5 | 4 | 3 | 3 | 2 | 1 | 1 |
| Highways | Highways - Bridge/Tunnel | 15-20 years | 20 | 20 | 15 | 12 | 10 | 8 | 6 | 5 |
| Highways | Highways - Bypass/Relief road | 10-15 years | 15 | 15 | 12 | 10 | 8 | 7 | 5 | 4 |
| Highways | Highways - Lorry Park | 5-7 years | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Highways | Highways - Service Improvement | 2-5 years | 4 | 4 | 3 | 2 | 1 | N/A | N/A | 1 |

** If required.*

# Developing the Indicative Spend Profile

## Potential Scheme Promoters

**An indicative spend profile for the SPOC interventions has been developed. This will be developed further as work progresses.**

To develop an indicative spend profile by scheme promoter, a category was applied to each intervention according to its type.

HThe assumed scheme promoters spending categories and the corresponding funding source were as follows, but noting that there is an important role for the private sector, partnerships, and innovative funding and financing tools:

- **Rail** – Network Rail
- **Mass Rapid Transit** – Local Transport Authorities
- **Active Travel** – Local Transport Authority
- **Strategic Road Network** – National Highways
- **Major Road Network** – Local Transport Authority

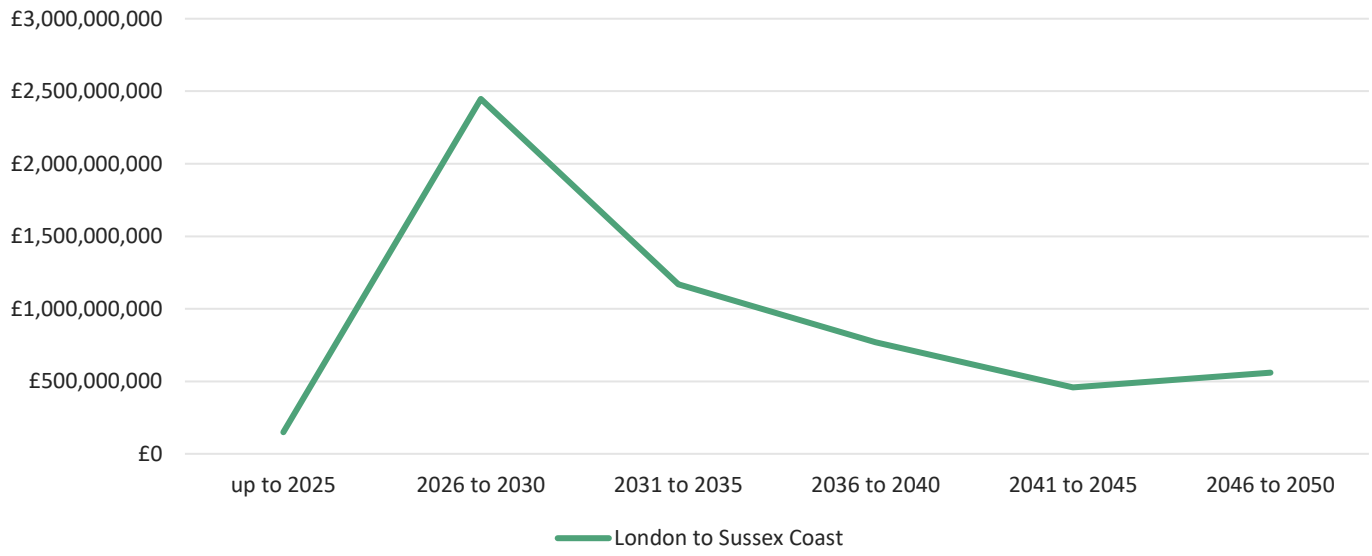
# Indicative Spend Profile

## Spend by potential scheme promoter

| Potential Funder | Mid Cost (£m), 2020 prices |
|---|---|
| Network Rail | 500 |
| National Highways | 200 |
| Local Transport Authority | 2,900 |
| **Total** | **3,600** |

## Spend profile (in outturn prices)

| Delivery Window | To 2025 (£m) | 2026-2030 (£m) | 2031-2035 (£m) | 2036-2040 (£m) | 2041-2045 (£m) | 2046-2050 (£m) |
|---|---|---|---|---|---|---|
| **Capital Cost** | 150 | 2,400 | 1,200 | 800 | 500 | 600 |



# Funding and Financing

## Financing upfront costs

**To bridge the mismatch in timing between the costs of implementing the interventions and the realisation of the resulting funding streams, financing for the packages will be required.**

As with the funding sources described above, there are a number of potential financing opportunities, each with different criteria and challenges to TfSE. These include:

- Public Work Loans Board, the largest lender to local authorities
- UK Infrastructure Bank, recently established by government to increase infrastructure investment
- Commercial Lending, an option if more attractive options such as PWLB or UKIB are unavailable

## Funding and Financing Strategy

**A robust funding and financing strategy is required to ensure the affordability of the packages set out in this SPOC.**

At this stage it is anticipated that the strategy will be framed by the following principles:

- Drawing on local funding sources for a significant proportion of funding required to deliver the transport infrastructure proposals
- Funding sources to cover operating, maintenance and ideally renewal costs
- TfSE working with local authorities to ring-fence revenue for transport infrastructure investment
- Attracting new investment (with associated taxes) to the region through enhanced connectivity brought by the new infrastructure

Further detail on the funding and financing strategy will be set out in the Strategic Investment Plan, which will document the anticipated investment profile over the life of the Transport Strategy and the associated funding and financing mechanisms required to deliver them.

The Strategic Investment Plan will further explore the requirement for government funding, which will partially be used for the development of schemes.

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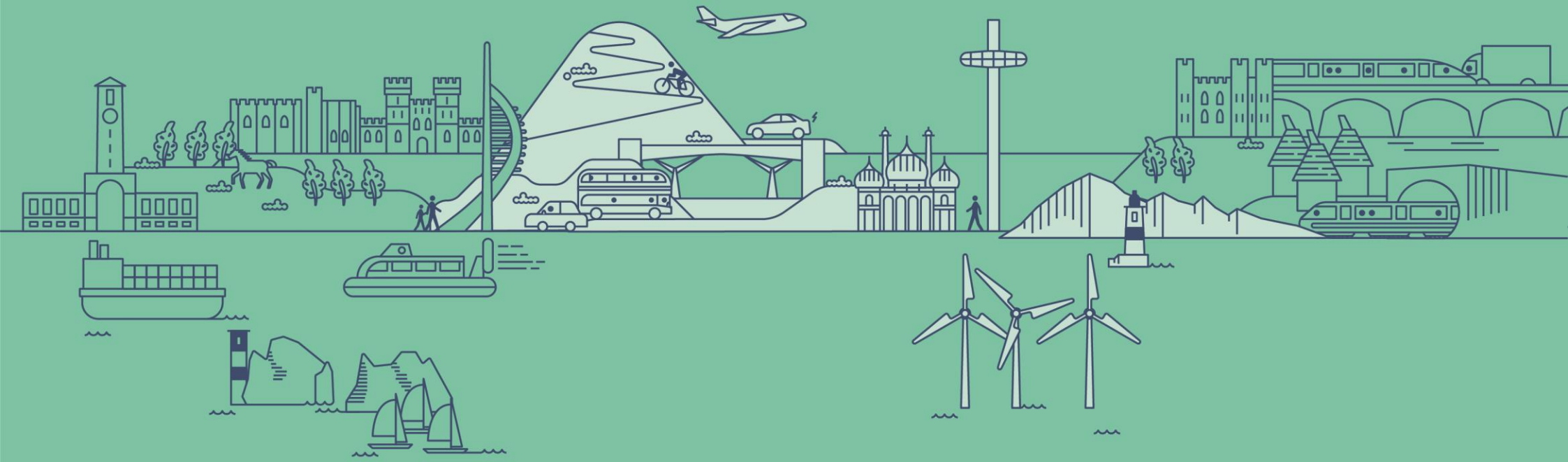


# Part 5

## Commercial Dimension

# Introduction

## Overview of the Commercial Dimension

**The Commercial Dimension addresses the commercial viability of delivering the Packages of Interventions.**

The Commercial Dimension outlines the viable procurement options to engage the appropriate service providers in the delivery of the Package of Interventions. The level of detail reflects the early stage of programme development and the level of detail available for the schemes identified in the Packages of Interventions.

It therefore demonstrates the various procurement options available without determining the preferred procurement route, and in doing so identifies the potential roles for TfSE and its partners in the delivery of the Transport Strategy.

The Commercial Case for the Packages of Interventions will be developed in further detail as part of the Strategic Investment Plan and within the individual Packages of Interventions specific OBC stage.

## Contents

**Part 5a Viability**

This identifies the elements needed to structure a procurement strategy, such as:

- understanding of the services;
- output specification;
- market assessment;
- deliverability assessment, and
- risk assessment and management.

**Part 5b Procurement**

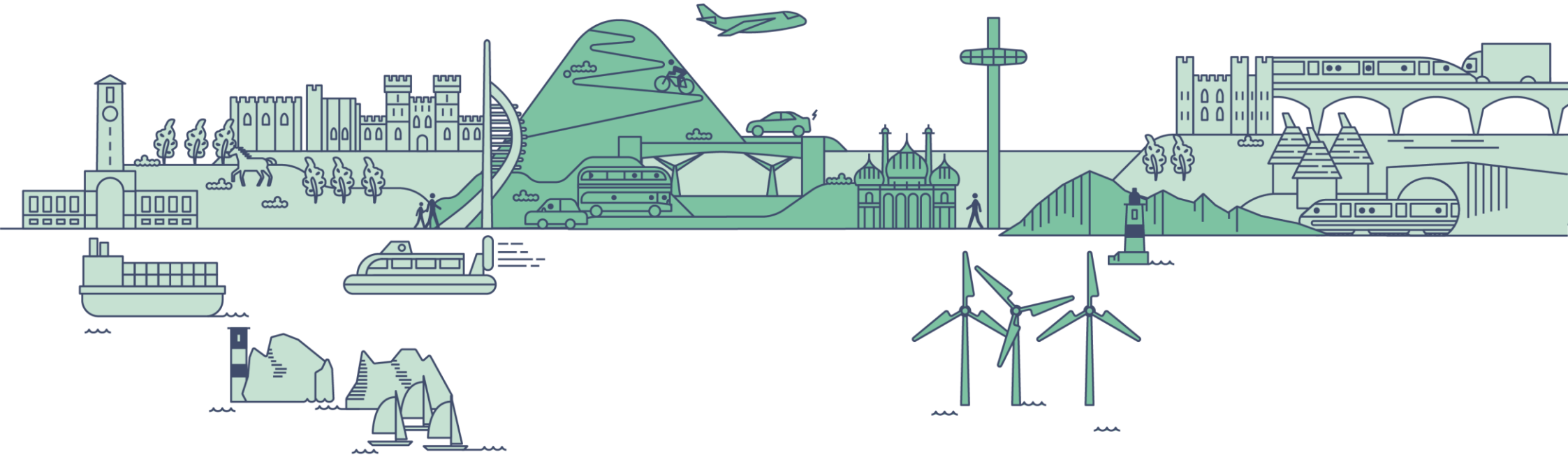
Outlines the available routes in terms of:

- procurement models;
- delivery models; and
- contract strategies.

# Alignment with Department for Transport Business Case Guidance

The table below sets out DfT's requirements for the Commercial Case and the level of detail expected at Strategic Outline Case stage. The final column of the table shows where the Commercial Dimension addresses each requirement.

| TAG Issue | TAG Requirement | Progress at SOC | Reference |
|---|---|---|---|
| Commercial approach | Outline the approach taken to assess commercial viability | Complete | Part 5a |
| Output-based specification | Summarise the requirement in terms of outcomes and outputs, supplemented by full specification as an annex | Outline | Part 5a |
| Procurement strategy | Detail the procurement and purchasing options including how they will secure the economic, social, and environmental factors outlined in the economic dimension | Outline | Part 5b |
| Human resource issues | Describe any personnel, people management and trade union implications, were applicable, including TUPE regulations | Partial | Part 5b |
| Sourcing Options | Explain the options for sources of the provision of services to meet the business need: this may include partnerships, frameworks and/or existing supplier arrangements, with the rationale for selecting preferred sourcing option. | Outline | Part 5b |
| Payment mechanisms | Set out the proposed payment mechanisms that will be negotiated with the providers | Not Required | N/A |
| Pricing framework and charging mechanisms | Include incentives, deductions and performance targets | Not Required | N/A |
| Risk allocation and transfer | Present an assessment of how the types of risk might be apportioned or shared, with risks allocated to the party best places to manage them subject to achieving value for money | Not Required | N/A |
| Contract length | Set out scenarios and rationale for contract length, including proposed key contractual clauses | Not Required | N/A |
| Contract management | Provide a high -level view of implementation timescales: detail additional support for in-service management during rollout and closure and set out arrangements for managing the contract through project or service delivery | Not Required | N/A |



# Part 5a

## Viability Considerations

## Understanding the Services

**At this stage TfSE will act as the leading promoter of the Packages of Interventions. It has been established that this includes a variety of projects, stakeholders and potential service providers.**

Confirmation of the scope and key service requirements of each Package of Interventions will be the first step towards the understanding of its viability.

TfSE in discussion with relevant partners identified hereafter should seek to confirm in principle:

- 'Core' services to be procured to justify the investment and achievement of benefits as set out in the Strategic Dimension;
- 'Desirable' additional services which can be still justified on a VfM basis; and
- 'Optional' services that are beneficial, possible and affordable.

**Table 5.1** presents our assumptions for the proposed key delivery partners for each Package of Interventions included in this SPOC. It is likely to be a combination in many instance, either for a single intervention or different interventions within a package.

**Table 5.1:** Packages of Interventions

| Package of Intervention | Proposed Key Delivery Partners |
|---|---|
| London – Sussex Coast Rail (Core) | DfT – Network Rail – Local Authorities – Operators – Private Sector |
| London – Sussex Coast Rail (R'ment) | DfT – Network Rail – Local Authorities – Operators – Private Sector |
| London – Sussex Coast Mass Transit | DfT – Local Authorities – Network Rail – National Highways – Operators – Private Sector |
| London – Sussex Coast Active Travel | DfT – Local Authorities – Sustrans – National Highways – Private Sector |
| London – Sussex Coast Highways | DfT – National Highways – Local Authorities – Private Sector |
| Global Policy Package | DfT – National Highways – Network Rail – Other Government Departments and their agencies – Operators – Local Authorities – Operators – Private Sector |

For many interventions, it is likely TfSE will be a key delivery partner, and for some interventions, it may be beneficial for TfSE to be a (co-)scheme promoter.

In many instance, DfT are likely to be a key delivery partner through funding or interventions requiring ministerial approval.

# Viability Considerations

## Output Specification

**To ensure the 'right thing, is being bought in the right way' a clear output specification will be required for each Intervention.**

Reflecting the level of definition for many of the Interventions under consideration in this SPOC, the Deliverability Assessment undertaken for the Options Assessment Report (OAR) considered a range of criteria at a high level for each typology. (These are set out under MCAF below.)

Central to ensuring a robust procurement strategy will be determining a detailed output specification for each intervention and reconfirming their deliverability and areas of risks.

## Market Assessment

**The range of intervention typologies represented in the SPOC Packages are generally reasonably technically mature proposals and therefore there is confidence that the supplier market has the capability and capacity to deliver them.**

As illustrated in the MCAF analysis of deliverability for the OAR, each of the typologies was assessed not to present a significant technical risk and an established supplier market is known to exist (e.g. for highway and rail enhancements, mass rapid transit, mobility hubs).

Additionally, the Packages of Interventions identified in this SPOC provide a divisible programme of schemes. This provides flexibility in the scale and timing of delivery of the interventions, aiding the development of a pipeline and hence ensuring supplier capacity.

## Sponsorship/ Procurement Options

**The range of typologies and divisible nature of the Packages of Interventions identified in this SPOC provides an opportunity to select the best sponsorship and delivery model for each Intervention or Package of Interventions.**

Given this flexibility, there are a range of routes to market. It is anticipated that a number of separate scheme promoters and delivery contracts will be required.

Further, given the anticipated timescales for delivering the full set of Packages, it is likely that the procurement options available to the scheme promoters, particularly in terms of specific contracts, will change during the lifecycle of the project. Therefore, the commercial and procurement strategy will evolve as the programme develops.

Potential sponsors will include, among others:

- TfSE
- Local Transport Authorities
- National Highways
- Network Rail
- DfT

# Viability Considerations

The Multi Criteria Assessment Framework applied at the OAR stage included a high-level assessment of the deliverability of each intervention. Each intervention was scored on a scale of 1 to 5 against the following criteria:

- **Capital costs**: Interventions were assigned a score based on their anticipated cost range. Interventions expected to incur high capital costs were assigned a score of 1, while those with lower costs were assigned a score of 5.
- **Value for Money**: Value for Money assessments were broadly based on the scale of funding each intervention is expected to need. For example, larger Nationally Significant Infrastructure Projects were generally assigned lower scores than interventions requiring less public funding.
- **Affordability**: Affordability was assessed against the likelihood that funding can be provided. It considered the attractiveness of the project to delivery partners to provide funding, and whether there is a need for additional funds from non-government sources. Interventions with high levels of affordability were allocated a score of 5, and those deemed least affordable were allocated a score of 1.
- **Timescales**: Interventions were assigned timescale bands, which encompassed short term (considered those that would be delivered within five years), medium term (delivered within five to fifteen years), and long-term (greater than fifteen years beyond the Local Plan end date) in line with Local Plan needs.
- **Technical Complexity**: Technical complexity was based on benchmarking against comparable schemes. 'Riskier' projects were assigned lower scores than less risky projects.
- **Acceptability**: At this stage of the assessment, it was assumed that those interventions with smaller budgets are more likely to be developed, funded, and supported by both the general public and politicians than those of a much greater scale of impact.
- **Evidence Base**: Finally, the Project Team reviewed the evidence base informing the development of each proposed Intervention. Those interventions that can cite projects that have been successfully delivered in the UK were awarded higher scores than those supported by 'thinner' evidence bases.

**Only the interventions which were assessed as being deliverable, namely were scored more highly, were progressed to the packaging of interventions stage and considered in this SPOC.**

## Risk Assessment

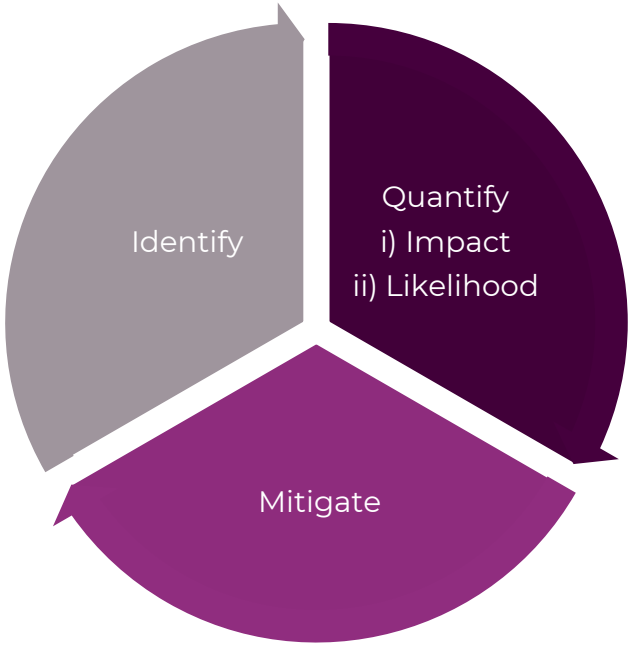
**For each Package risks should be identified, quantified and mitigated in line with the methodical approach outlined within HM Treasury's Green Book.**

The scheme risks can largely be grouped into the following categories:

- Risks to the project programme
- Political risks
- Risks to scheme cost
- Risks to scheme funding
- Risks to operations
- Design and information risks
- Health and safety risks
- Reputational risks

Risk should be quantified by assessing the likelihood (or probability) of them occurring, denoted as 'P', and the severity of impact on the project, denoted as 'I'. Using a 5-point scale from 1 (low) to 5 (high) the significance of these factors can be scored. These scores are multiplied by each other (P x I) to determine the total risk score, which ranges from 0-25.

**Figure 5.1: Approach to Risk Assessment**




An illustration of an approach to risk assessment is shown in **Figure 5.1.**

Following the initial assessment of scheme risks, a systematic approach should be adopted to respond to risks and allocate responsibility to the most appropriate party in line with the governance arrangements.

**One of the following four strategies can be adopted for each risk when developing a suitable response plan:**

- **Accept or tolerate** consequences in the event that the risk occurs, where a) the cost of taking any action exceeds the potential benefit gained; or b) there are no alternative courses of action available
- **Treating the risk**: continuing with the activity that caused the risk by employing four different types of control – preventative, corrective, directive and detective controls
- **Transferring the risk**: risks transferred to a third party e.g. insurer or contractor
- **Terminating** the activity that gives rise to the risk

Following the implementation of these strategies, if a risk can be treated and its effects mitigated, the risks should be 're-scored', and this new score included in the risk register.

# Management of Risks

## Governing Principle

**The governing principle, as described by HM Treasury, is that specific risks should be allocated to the party best able to manage it, subject to the risk premium.**

This is intended to share risk between the promoter, stakeholders and potential service providers. As the development of the Packages of Interventions progresses and the commercial strategy to support their delivery is developed, the following principles should be taken into account:

- The public sector should consider transferring risk to the private sector when the service provider is better able to influence the outcome than the procuring authority.
- The degree to which risks may be transferred depends on the specific proposal under consideration.
- The private sector should be encouraged to take the risks it can manage more effectively than the public sector; particularly where it has clear ownership, responsibility and control.
- The successful negotiation of risk transfer requires a clear understanding by the procuring authority of the risks presented by a proposal; the broad impact that these risks may have on the service provider's incentives and financing costs (cost drivers); and the degree to which risk transfer offers Value for Money.

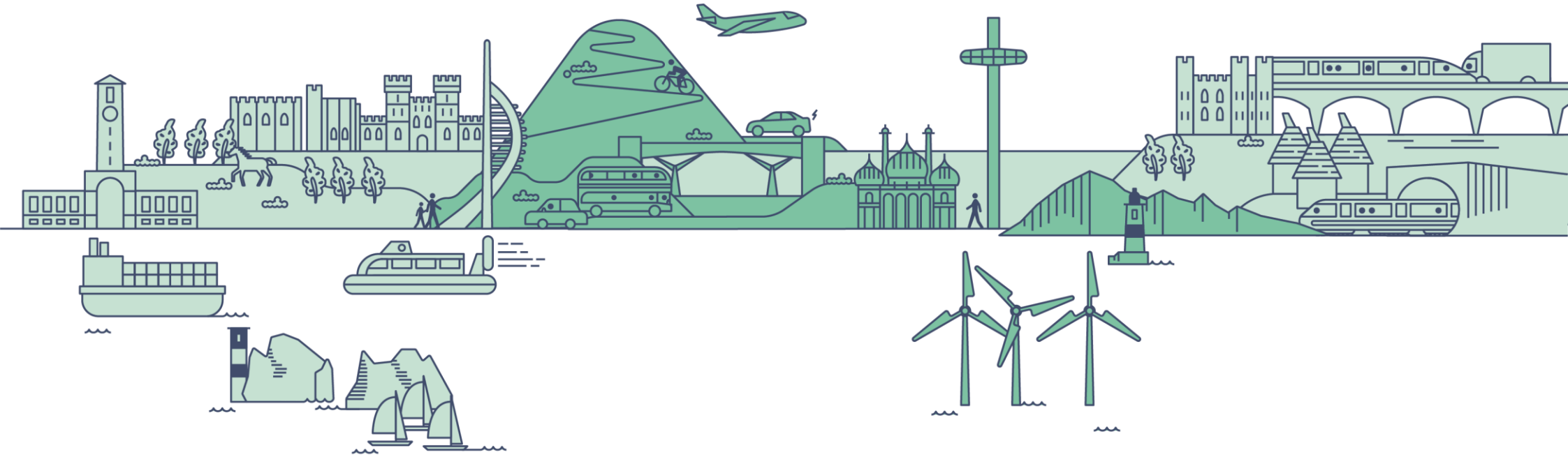
## Consideration of Risks

**TfSE should seek to apportion or share the different types of risks between parties, with risks allocated to the party best placed to manage them subject to achieving value for money.**

The delivery of the Packages should be set in a way that:

- allocates risk appropriately across contracts;
- incentivises the intended outcomes in terms of performance, efficiency and innovation;
- facilitates the delivery of the project to time and budget; and
- secures the targeted economic, social and environmental benefits of the project as discussed with stakeholders and agreed with decision makers.

**A Draft Risk Register for this SPOC is presented in the Management Case.**



# Part 5b

## Procurement Options

# Procurement Options

## Sourcing Options

In place of the Official Journal of the European Union's Tenders Electronic Daily (OJEU/TED), the Find a Tender Service (FTS) is the new UK e-notification service where notices for new procurements are required to be published.

All public-sector tenders valued above £4,551,413 (for infrastructure projects) must be advertised. Furthermore, Public Contract Regulations PCR 2021 indicate that:

- Minimum thresholds for sub-central governments is £25,000
- Public supply and services contract and their design context threshold is £213,477

There are several procurement procedures available to schemes to which the FTS/OJEU values apply. These each have particular benefits and use cases, as follows.

## Open Procedure

This procedure allows an unlimited number of interested parties to tender against defined parameters. There are no restrictions (e.g. pre-qualification) on the parties who are permitted to tender, meaning that some parties may not be suitable to carry out the work. This procedure is straightforward and transparent but can attract a large number of potential bidders (which will require a greater degree of assessment and resource requirements).

This route is not usually recommended for construction projects due to the high number of tenders that could be expected and the particular skills and experience that may be required of potential bidders.

## Restricted Procedure

This is a two-stage procedure. The first stage allows the contracting authority to set the minimum criteria relating to technical, economic and financial capabilities that the potential bidders must satisfy. Following evaluation of the responses to the first stage a minimum of five bidders (unless fewer qualify) are invited to tender in the second stage. This process is typically used to appoint consultants or contractors on traditionally procured projects.

## Accelerated Restricted Procedure

As for the Restricted Procedure, but used where, for reasons of urgency, the contracting authority must procure the contract in a reduced time frame. Any contracting authority wishing to use this procedure must be able to demonstrate the reasons of urgency.

# Procurement Options

## Competitive Dialogue Procedure

This procedure is appropriate for complex contracts where contracting authorities:

- Are not objectively able to define the technical means capable of satisfying their needs or objectives, and / or
- Are not objectively able to specify the legal and/or financial make-up of a project.

This is a multi-stage procedure. The first stage is a pre-qualification to select the potential bidders to participate in the dialogue. In the second stage, the contracting authority enters into a dialogue with the potential bidders to identify and define the means best suited to satisfying their needs. Any aspect of the contract may be discussed, including technical requirements for the works to be delivered and the commercial / contractual arrangements to be used. The dialogue may be conducted in successive phases with the remaining bidders being invited to tender..

By the end of the dialogue phase the contracting authority's requirements will have been determined such that the scheme can be tendered. In the final stage, the remaining bidders from the dialogue phase are invited to tender for the scheme.

## Competitive Procedure with Negotiation

Within this procedure, bidders initially submit tenders based on the information issued by the contracting authority. The contracting authority is then able to review the tenders it has received and negotiate with the bidders, following which the tenders will be resubmitted. This procedure may therefore be useful where the requirements are well developed initially, and full tender documents can be produced but it is felt that there may be advantage in retaining the ability to hold negotiations if there are certain aspects which bidders raise.

## Preferred Procurement Procedure

Considering the size, complexity and value of the Packages and Interventions within the SPOC, it is likely that a combination of the above procurement procedures will be used to procure the necessary services to support the delivery of TfSE's Transport Strategy.

As the SPOC interventions will be delivered using a programme approach, the opportunity to deliver individual interventions or packages of work within the programme will dictate the procurement and sourcing options for individual packages of work.

# Procurement Options

## Programme Prioritisation

The need to prioritise the Packages of Interventions could present itself. For this purpose a framework for programme prioritisation could be based on:

- Benefit impact – greatest Net Zero impact;
- Deliverability – ease of delivery based on sponsor availability;
- Profitability – potential of revenue generation;
- By nature of Intervention - geography, value, ongoing liability;
- Link to wider benefits and other Packages of Interventions.

Further consideration of the programming of the interventions will be addressed in the Strategic Investment Plan.

## Challenges/Blockers

The risks identified during the viability review should be taken forward through procurement. Risk should be captured in contracts and passed on where possible. Additional risks related to the chosen procurement method should also be considered.

## Additional Resourcing

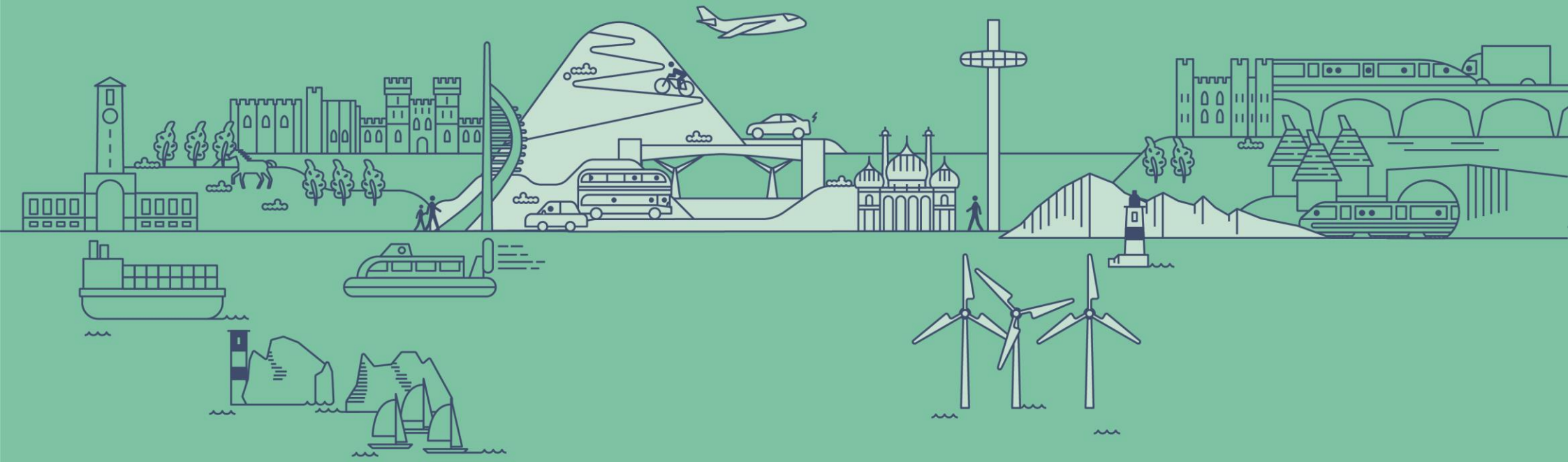
TfSE will provide resource where appropriate. This could involve:

- business case and scheme development, including use of analytical framework;
- scheme prioritisation, (securing) funding, and advocacy;
- procurement and sourcing supply chains for development / planning and construction / operations; and
- staff resource and resource funding to support the above as well as build capacity and capability within scheme promoters' own organisations.

In addition, Transport for the South East has recently been awarded funding by the Department for Transport to support Local Transport Authorities in the delivery of their Local Transport Plans. The support will help LTAs to enhance their capability in key areas, such as the development of business cases, scenario planning and undertaking carbon impact assessments. The initial stage of the work will involve identifying the capability gaps, with the latter stages providing support to address these areas.

This work will form the initial stages of the development of our Centre of Excellence proposal and will help to determine how TfSE supports the proposals identified by local transport authorities over the rest of the financial year.

TRANSPORT FOR THE South East



# Part 6

## Management Dimension

# Management Case

## Overview

**The Management Dimension sets out the proposed approach for managing the delivery of the SPOC Packages.**

The Management Dimension identifies the need for robust arrangements to be in place for:

- Delivery
- Monitoring and evaluation of the scheme (including feedback into the organisation's strategic planning cycle)

For each Package of Interventions, there will need to be a **Management Plan** to ensure that each intervention is being managed in accordance with best practice, government guidance, subjected to independent assurance and that the necessary arrangements are in place for:

- Change and contract management
- Risk management
- Benefits realisation
- Lessons management
- Data information security
- Project closure

## Contents

**Part 6a Governance Arrangements**

This identifies the considerations for establishing:

- Programme management
- Governance structure
- Communications plan

**Part 6b Delivery Plan**

Outlines the areas to address to ensure the successful delivery of the SPOC Packages, including:

- Project plan
- Benefits realisation plan

**Part 6c Delivery Risks**

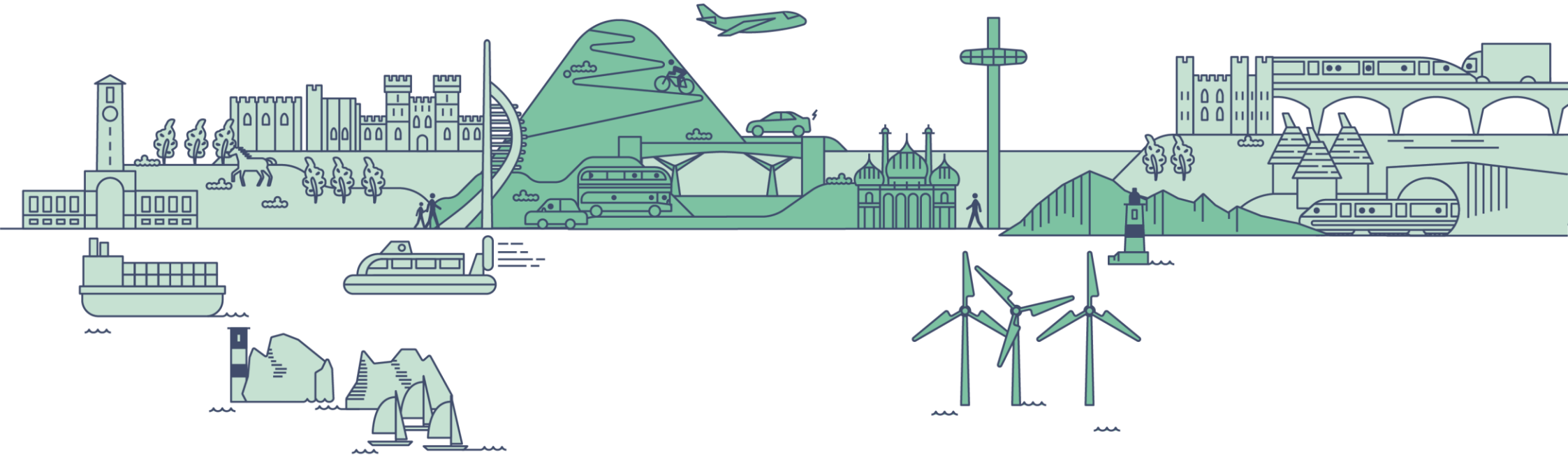
Addressing management of delivery risks in terms of planning, strategies and mitigation.

# Alignment with Department for Transport Business Case Guidance

The table below sets out the DfT's requirements for the Management Dimension and the level of detail expected at Strategic Outline Case stage. The final column shows where the Management Dimension addresses each requirement.

| TAG Issue | TAG Requirement | Progress at SOC* | Reference |
|---|---|---|---|
| Introduction and objectives | Outline the approach taken to assess if the investment is deliverable | Complete | Part 6a |
| Evidence of similar projects | Provide evidence of similar projects that have been successful to support the recommended project approach. | Complete | To be included at further business case stages |
| Governance, organisational structure and roles | Describe key roles, accountability's, roles and responsibilities and how they are resourced | Complete | Part 6a |
| Assurance | Assurance strategy and plan with key assurance and approval milestones | Complete | To be included at further business case stages |
| Programme or project reporting | Describe the reporting arrangements including delegated authorities, exception reporting, tolerances and change control | Outline | Part 6b |
| Programme or project scope, dependencies and constraints | Set out deliverables and decisions that are provided/ received from other projects and any constraints | Outline | To be included at further business case stages |
| Project implementation | Summarise the key-work packages, product and work break down structures for executing work | Outline | Part 6b |
| Programme or project plan | Outline a plan with key milestones, progress and include a critical path | Outline | Part 6b |
| Stakeholder engagement and communications | Set out the communications strategy and plans that accounts for all stakeholders, aligning with those outlines in the strategic dimension | Outline | Part 6a |
| Risk and issues management | Provide arrangements for risk management and issues that are likely to affect delivery and implementation | Outline | Part 6c |
| Lessons management | Produce a strategy and plan for learning from other proposals, learning throughout the proposal and sharing lessons with other teams. | Outline | To be included at further business case stages |
| Benefits management | Produce a longlist of prioritised benefits and a Benefits Logic Map to show how benefits contribute to strategic objectives. | Outline | Part 3e |
| Data Information Security | Explicitly address the protection of critical systems, digital assets and commercially sensitive data | Outline | To be included at further business case stages |
| Benefits management and evaluation | Set out the approach to managing the realisation and a credible plan for the evaluation of benefits including a set of Benefit Profiles | Outline | Part 6b |
| Project Closure | Summarise arrangements for project closure and how data will be captured for future benchmarking | Outline | To be included at further business case stages |

*__Note__: Given the early stage of the work not all SOC requirements have been completed at this stage.



# Part 6a
# Governance Arrangements

# Programme Management and Governance

## Managing, Successful Programmes

**The Cabinet Office's recommended methodology for the delivery of programmes is Managing Successful Programmes (MSP).**

MSP represents proven good practice for successfully delivering transformational change and is drawn from the experiences of both public and private sectors. TfSE's approach will align with this.

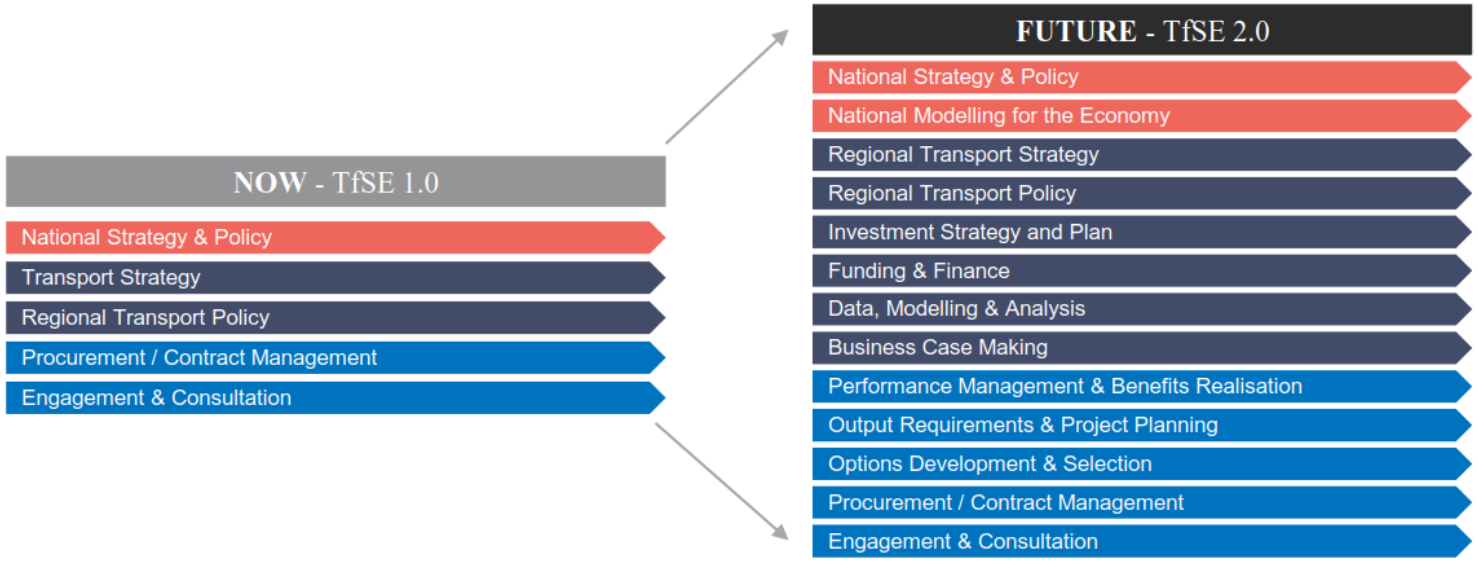
## TfSE Future Capability Requirements

**To deliver the Transport Strategy and successfully manage the SPOC Programme it is recognised that TfSE will need to grow and develop new capabilities to undertake a greater range of activities, including the governance of major programmes.**

This is captured in the Future Organisation Report (Arup) and an example structure for TfSE is shown in **Figure 6.1.**

An organisational set up such as TfSE 2.0 would enable TfSE to lead and work more directly on the Package of Interventions Delivery Plans, monitor benefit realisation plans and take Senior Responsible Officer roles where suitable.

**Figure 6.1: TfSE Project Governance (Source: Future Organisation Report, 2021)**




The successful delivery of the programmes and projects will build upon the experience of the delivery partners.

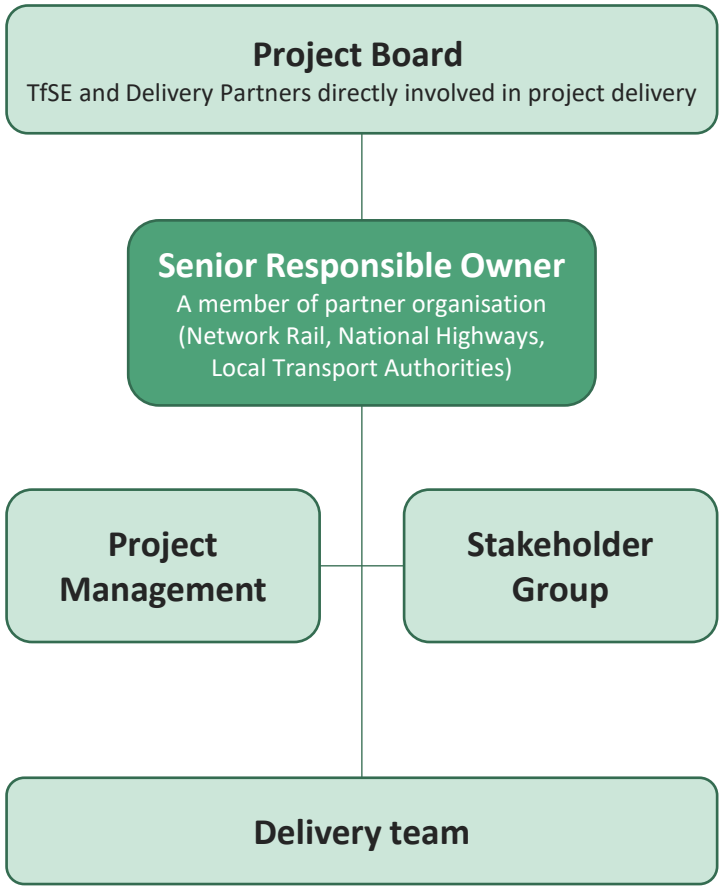
# Programme Management and Governance

## Governance Structure

**Project specific governance will need to be defined for each project. The overall structure should include a Senior Responsible Owner (SRO), a Project Board, and key stakeholder group. An example structure is shown in Figure 6.2.**

- The SRO will be the Sponsor of the Project and, as such, will be responsible for the project outcomes and delivery.
- The SRO can be a member of the project delivery partner organisation (e.g., Network Rail, National Highways, Local Transport Authorities).
- The board should include members of TfSE and key delivery partners directly involved in the project delivery.
- The project board should meet regularly to review project progress and make decisions. The board will review the business case at appropriate project plan milestones.
- The stakeholder group will include organisations indirectly linked to the delivery of the project but interested in the project outcomes.

**Figure 6.2: Project Governance Template**




## Strategy, Framework and Plans

**For each Package of Interventions the Management Plan will include:**

- Estimated timing of the delivery of each intervention in the Package;
- Identified 'owners' and/or 'sponsors' for each intervention;
- Estimated costs for each intervention;
- Governance frameworks (or options thereof) to support the delivery of the Packages; and
- Key Delivery Risks.

# Stakeholder Engagement

## Stakeholders

**The Area Study Programme has been supported by extensive stakeholder engagement activity.**

As set out in the Introduction to this SPOC, at the outset of this study, TfSE and the Technical Advisor team undertook a stakeholder mapping exercise for the London to Sussex Coast Area to categorise key organisations and individuals according to their interest and influence.

This exercise enabled TfSE to define four distinct tiers of stakeholder. For each of these tiers, a tailored engagement approach has been followed.

TfSE has refreshed the Stakeholder Mapping exercise undertaken at the beginning of the Area Study Programme to update their approach for the Strategic Investment Plan development and forthcoming consultation.

## Stakeholder and Communication Plan

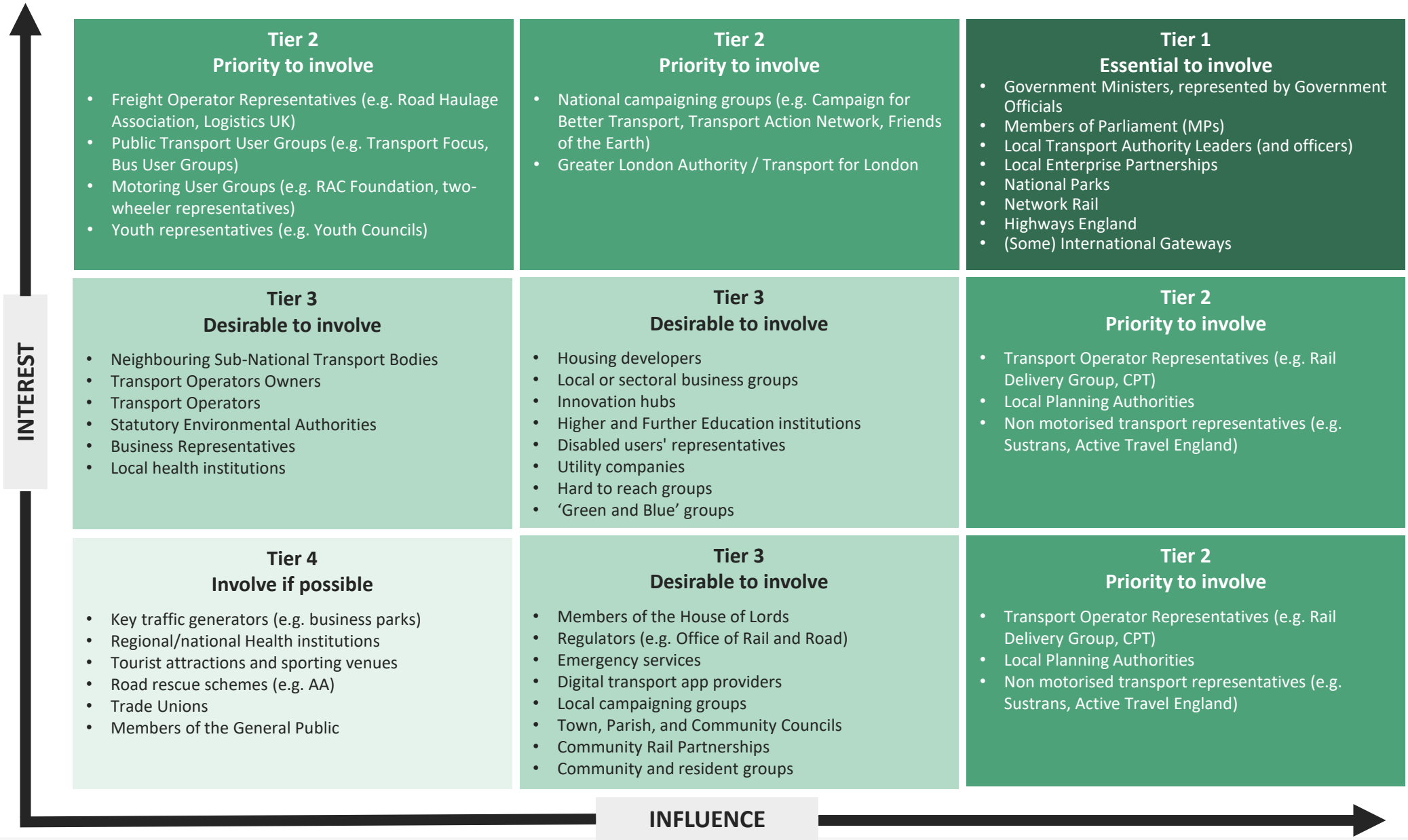
**Building on the stakeholder engagement to date, it is proposed that a Stakeholder and Communications Plan be developed to support the delivery of the Strategic Investment Plan.**

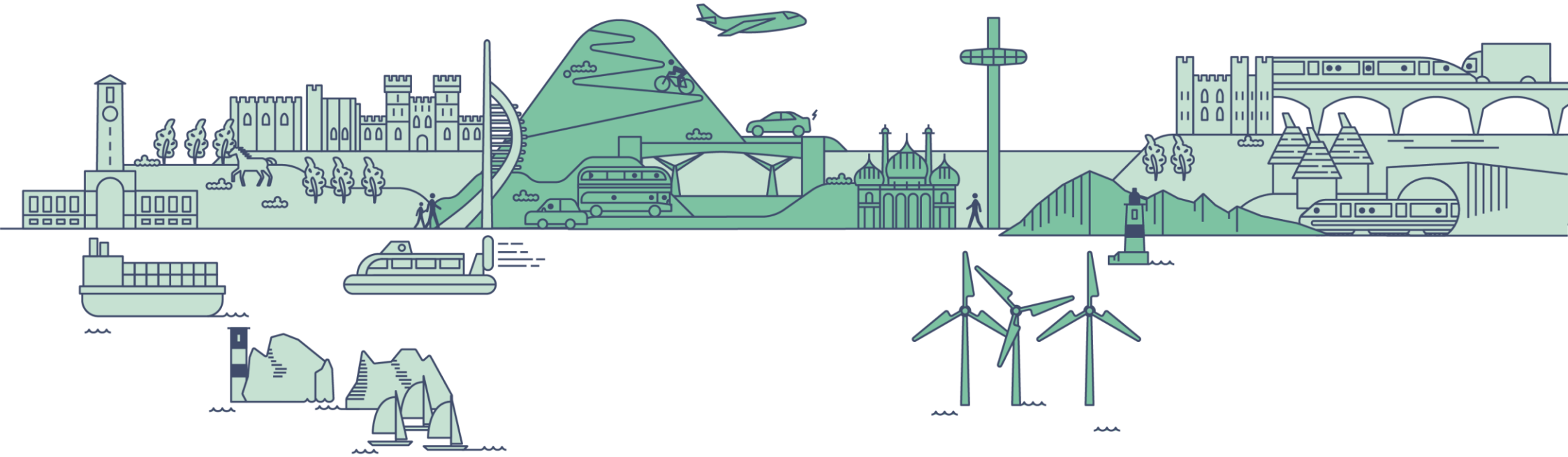
Given the wide range of stakeholders across the region, their differing views and specific local contexts, this Stakeholder and Communications Plan will reconfirm the stakeholders and their tiers, set out how and when and by whom they will be engaged, and the input sought from them and its purpose in the overall project programme. This is summarised in **Figure 6.3** overleaf.

The profile of stakeholders who will need to be engaged in future stages may be different to those involved at earlier stages. For example, there will likely need to be more engagement with potential funders and delivery partners (developers, constructors, operators, etc) to ensure the development of the Packages of Interventions are informed by the best available advice.

# Stakeholder Mapping

## Figure 6.3: Stakeholder Tiers





# Part 6b
# Delivery Plan

# Delivery Plan

## Project Management

**PRINCE – PRojects IN Controlled Environment (PRINCE2) represents proven good practice in project management and is drawn from the experiences of both public and private sectors over many years.**

PRINCE2 is the Cabinet Office's recommended methodology for the delivery of projects and will be appropriate for the programme and project framework for the further development of the SPOC Packages and their successful delivery and realisation of forecast benefits.

In developing the Package Delivery Plans, consideration will be given to:

- Projects: structure
- Reporting arrangements
- Governance arrangements
- Key roles and responsibilities
- Appointed personnel and any vacancies

A Senior Responsible Owner will be identified in the Delivery Plan.

## Senior Responsible Owner

**The SRO is accountable for the programme (at the SPOC level and Package level as appropriate), and for ensuring that it meets its objectives and delivers the expected benefits.**

The individual who fulfils this role should be able to lead and champion the programme and must be empowered to direct the programme and take decisions; for example, whether to delay or stop any part of the programme. The SRO must have sufficient seniority and authority to provide leadership to the programme and take on accountability for delivery.

The day-to-day leadership may be undertaken by a Programme Director, but this is not an alternative to the SRO role.

The Package programme business case will identify an SRO as suitable based on the project type and availability. It is anticipated that SRO could be sourced from:

- Network Rail for rail related projects and possibly DfT and TfSE;
- National Highways and possibly DfT for Strategic Road Network related projects; and
- Local Authorities  or TfSE for local highway, placemaking or policy related projects.

## Programme Plan

**The Programme Plan is used to control and track the progress and delivery of the programme and resulting outcomes.**

It supports the Delivery Plan and describes how, when and by whom a specific project, milestone or set of targets will be achieved. It is the detailed analysis of how identified programme targets, milestones, deliverables and products will be delivered to timescales, costs and quality.

The current assumptions for the indicative durations for the different types of interventions comprising the different Packages are presented overleaf in the tables over. Planning timescales needs to reflect the scale and complexity of the scheme and its current stage (e.g. pre-SOBC, SOBC, OBC etc) and what powers and consents are required along with major considerations such as securing funding and land assemblage.

For each Package a Programme/Project Plan will be developed indicating milestones and critical paths.

# Delivery Plan – Assumption Summary (Rail and Mass Rapid Transit)

| Category | Sub-Category | Timeframe | Implementation |
|---|---|---|---|
| Rail | New Offline Rail Infrastructure | 15-20 years | 5 years |
| Rail | New Online Rail Infrastructure | 5-10 years | 2 years |
| Rail | Service Improvement | 2-7 years | 1 years |
| Rail | Reinstating Line | 10-15 years | 4 years |
| Rail | Level Crossing Removal | 5-7 years | 1 years |

| Category | Sub-Category | Timeframe | Implementation |
|---|---|---|---|
| MRT | New BRT/MRT | 5-10 years | 3 years |
| MRT | New Ferry/Waterway | 5-8 years | 2 years |
| MRT | Service Improvement | 2-5 years | 1 years |
| MRT | New Strategic Mobility Hub | 3-5 years | 2 years |
| MRT | Infrastructure Improvement | 3-5 years | 1 years |

# Delivery Plan – Assumption Summary (Active Travel and Highways)

| Category | Sub-Category | Timeframe | Implementation |
|---|---|---|---|
| Active Travel | New Cycleway/Footways | 2-5 years | 1 year |
| Active Travel | Improved Cycleways/Footways | 1-3 years | 1 year |
| Active Travel | Service Improvement | 0-2 years | 1 year |
| Active Travel | Mobility Hubs | 2-3 years | 1 year |
| Active Travel | Online Road Improvements | 2-3 years | 1 year |
| Active Travel | Offline road improvements | 3-5 years | 1 year |
| Active Travel | New Cycleway/Footways | 3-5 years | 1 year |

| Category | Sub-Category | Timeframe | Implementation |
|---|---|---|---|
| Highways | Junction Improvement | 3-5 years | 1 year |
| Highways | Widening | 3-5 years | 1 year |
| Highways | New Online Infrastructure Improvement | 3-5 years | 1 year |
| Highways | Bridge/Tunnel | 15-20 years | 5 years |
| Highways | Bypass/Relief Road | 10-15 years | 4 years |
| Highways | Lorry Park | 5-7 years | 2 years |
| Highways | Service Improvement (e.g. CAZ) | 3-5 years | 1 year |

# Benefits Realisation Plan

## Benefits Management

**A benefit is defined as "*the measurable improvement resulting from an outcome perceived as an advantage by one or more stakeholders, which contributes towards one or more organisational objectives*".**

**In the 30-year Transport Strategy TfSE outlines its goals, priorities and principles to achieve a sustainable transport strategy which has the potential to deliver £450 billion GVA backing high growth sectors and create 475,000 jobs.**

To support the realisation of this benefits management should be undertaken throughout the project lifecycle and into operations/business-as-usual, not just during investment decision-making. The identification of benefits should happen before a project is even initiated, informed by a defined problem, strategy or policy.

At a strategic level TfSE has undertaken this benefit identification within the Transport Strategy. These benefits are then developed throughout the project lifecycle, and then typically measured during project delivery and after the project has closed.

## Best Practice

**For benefits management to be successful the SROs should consider applying the following principles throughout the lifecycle:**

- Benefits management should be integrated into other project management activities and should be a regular, continuous activity.
- Project benefits should be identified, quantified and managed in line with the programme to ensure consistency between projects.
- Benefits management should be evidence-based and driven by data.
- As far as practicable, benefits should be specific enough and isolated enough so that their realisation can be directly attributed to the project/programme.

## Outputs, Outcomes, and Impacts

**The TfSE Transport Strategy KPIs should form the basis from which the Package business case should develop the initial desired outputs, outcomes and impacts for the Packages of Interventions programme. This should align with the Theory of Change Framework, as presented in Part 2f.**

These desired outputs, outcomes and impacts are the actual benefits that are expected to be derived from the programme:

- **Desired outputs** – tangible effects that are funded and result from the programme.
- **Desired outcomes** – what happens as a result of the outputs.
- **Desired impacts** – the final impacts brought about by the scheme in the short, medium and long term as a result of the outputs and outcomes.

The TfSE Transport Strategy KPIs, as set in 'A bold vision for a brighter future' monitoring section are set out below. These describe the desired outputs, outcomes and impacts in the Economic, Social and Environmental dimensions.

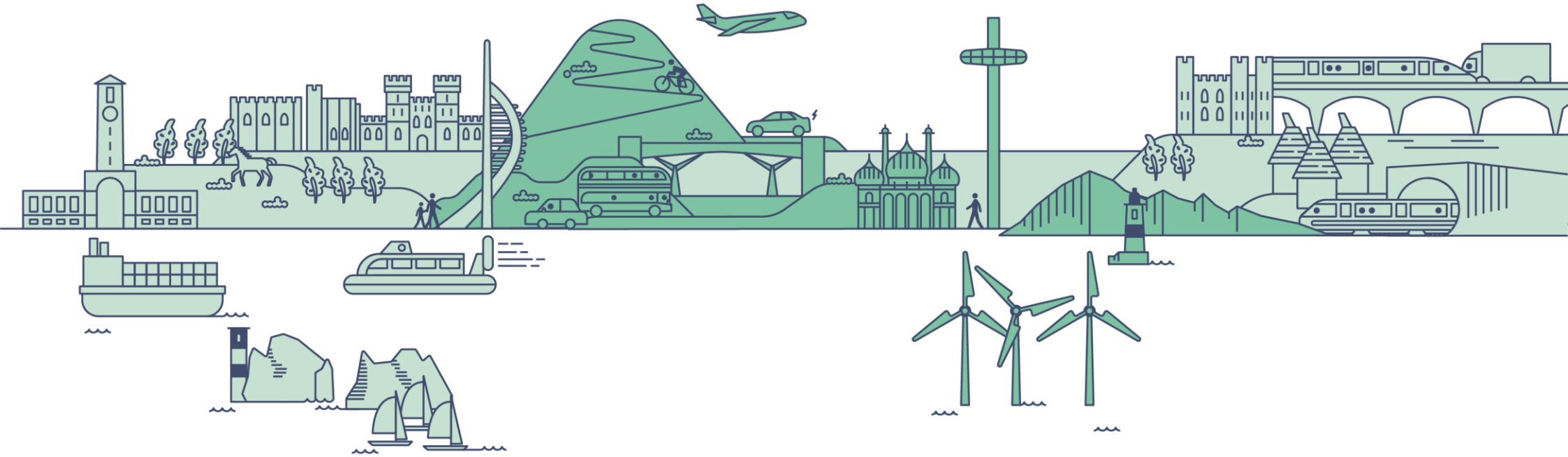
# Benefits Realisation Plan - The benefits (1 of 2, source: TfSE Transport Strategy)

**Table 5.1** Key Performance Indicator

| | Strategic Priorities | Indicators |
|---|---|---|
| Economic | Better connectivity between our major economic hubs, international gateways (ports, airports and rail terminals) and their markets. | The delivery of improved road and railway links on corridors in need of investment.<br>Improved public transport access to Heathrow and Gatwick Airports.<br>Improved long-distance rail services (measured by journey time and service frequency). |
| | More reliable journeys for people and goods travelling between the South East's major economic hubs and to and from international gateways. | Improved Journey Time Reliability on the Strategic Road Network, Major Road Network, and local roads (where data is available).<br>Improved operating performance on the railway network, measured by Public Performance Measure (PPM) and other available passenger and freight performance measures, where available (e.g. right time delivery). |
| | A transport network that is more resilient to incidents, extreme weather and the impacts of a changing climate. | Reduced delays on the highways network due to poor weather.<br>Reduced number of days of severe disruption on the railway network due to poor weather.<br>Metrics relating to reduced delay on road network suffering from Road Traffic Collisions. |
| | A more integrated approach to land use and transport planning that helps our partners across the South East meet future housing, employment and regeneration needs sustainably. | The percentage of allocated sites in Local Plans that are developed in line with Local Plans. |
| | A 'smart' transport network that uses digital technology to manage transport demand, encourage shared transport and make more efficient use of our roads and railways. | Increase in the number of bus services offering 'Smart Ticketing' payment systems.<br>Number of passengers using 'Smart Ticketing'.<br>Number of passengers using shared transport. |
| Social | A network that promotes active travel and active lifestyles to improve our health and wellbeing. | Increase in the length of the National Cycle Network in the South East.<br>Increase in the length of segregated cycleways in the South East.<br>Increase mode share of trips undertaken by foot and cycle.<br>Number of bikeshare schemes in operation in the area.<br>Mode share of walking and cycling. |

# Benefits Realisation Plan - The benefits (2 of 2, source: TfSE Transport Strategy)

| | Strategic Priorities | Indicators |
|---|---|---|
| Social | Improved air quality supported by initiatives to reduce congestion and encourage further shifts to public transport. | Reduction in NOx, SOx and particulate pollution levels in urban areas. |
| | An affordable, accessible transport network for all that promotes social inclusion and reduces barriers to employment, learning, social, leisure, physical and cultural activity. | A reduction in the indicators driving the Indices of Multiple Deprivation in the South East, particularly in the most deprived areas in the South East area. |
| | A seamless, integrated transport network with passengers at its heart, making it simpler and easier to plan and pay for journeys and to interchange between different forms of transport | Increase in the number of cross-modal interchanges and/or ticketing options in the South East. |
| | A safely planned, delivered and operated transport network with no fatalities or serious injuries among transport users, workforce or the wider public. | Reduction in the number of people Killed and Seriously Injured by road and rail transport. |
| Environmental | A reduction in carbon emissions to net zero by 2050 to minimise the contribution of transport and travel to climate change. | Reduction in carbon emissions by transport. |
| | A reduction in the need to travel, particularly by private car, to reduce the impact of transport on people and the environment. | A net reduction in the number of trip kilometres undertaken per person each weekday.<br>A reduction in the mode share of the private car (measured by passenger kilometres). |
| | A transport network that protects and enhances our natural, built and historic environments. | No transport schemes or interventions result in net degradation in the natural capital of the South East, instead aiming for environmental net gain for priority ecosystem services (such as natural flood risk management).<br>No transport schemes or interventions result in a net loss of biodiversity, but seek to achieve a minimum of 10% net gain in biodiversity managed for 30 years, in line with the requirements of the Environment Bill. |
| | Use of the principle of 'biodiversity next gain' ( i.e. development that leaves biodiversity in a better state than before) in all transport initiatives | Use of the principle of 'biodiversity next gain' in all transport initiatives.<br>No transport schemes or interventions result in a net loss of biodiversity, but seek to achieve a minimum of 10% net gain in biodiversity managed for 30 years, in line with the requirements of the Environment Bill. |
| | Minimisation of transport's consumption of resources and energy. | Reduction in non-renewable energy consumed by transport. |



# Part 6c
# Delivery Risks

# Delivery Risks

## Planning Risk Management

**Risk management is a structured approach to identifying, assessing and controlling risks that emerge during the course of the policy, programme or project lifecycle.**

Its purpose is to support better decision making through understanding the risks inherent in a proposal and their likely impact.

Effective risk management supports the achievement of wider aims, such as:

- effective change management;
- the efficient use of resources;
- better programme and project management;
- minimising waste and fraud; and
- innovation.

## Risk Management Strategy

**Strategies for the proactive and effective management of risk involve:**

- identifying possible risk in advance and putting mechanisms in place to minimise the likelihood of them materialising with adverse effects;
- having processes in place to monitor risks, and access to reliable, up-to-date information about risks;
- the right balance of control to mitigate against the adverse consequences of the risks if they should materialise; and
- decision making processes supported by a framework for risk analysis and evaluation.

Risk management strategies for individual policies, programmes and projects should be adopted in a way that is appropriate to their scale.

## Risk Mitigation and Management

**Recognised methods for the mitigation of risk throughout the lifespan of the policy, programme or project include:**

- early consultation;
- avoidance of irreversible decisions.
- pilot studies;
- flexible design;
- precautionary action;
- procurement and contractual mitigation;
- manage reliance on technology; and
- alternative options.

Programme risk registers should be developed for each Package of Interventions to include the risks to the project delivery and consideration of the above-mentioned mitigation methods.

A draft programme risk register has been developed and is presented below.

# Draft Risk Register

| Risk | Impact | Likelihood | Mitigation | Owner | P | I | Risk |
|---|---|---|---|---|---|---|---|
| Project Programme External Dependencies | Project realisation and benefit realisations are delayed because of external Package of Interventions dependencies (e.g., DfT funding programmes) | Likely | Identify external dependencies and seek alternatives. Where alternatives are not possible identify critical path on Package programme and liaise with external stakeholders as soon as practical | TfSE | 3 | 5 | **15** |
| Project Cost | Value for Money and Benefit Realisation can be affected (negatively) by raising cost (or positively by decreasing cost) | Very Likely | Consideration of risk and optimism bias In the cost plan should be accounted for, e.g. in relation to optimism and effects of the wider UK economy on project capital cost (labour, material…) | TfSE | 5 | 3 | **15** |
| Funding | Scheme realisation might be impacted by change in funding availability | Likely | Alternative funding plans should be explored to mitigate the risk of funding un-availability including capturing point of no-return on Package | TfSE | 3 | 5 | **15** |

# Draft Risk Register

| Risk | Impact | Likelihood | Mitigation | Owner | P | I | Risk |
|---|---|---|---|---|---|---|---|
| Project Programme Inter - Dependencies | Benefit realisation and programme delays due to dependencies between Packages of Interventions | Likely | Identify dependencies between packages either due to practical programme rationale (e.g. deliver station and cycle interchange prior to opening MRT) or benefit realisation (e.g. passengers unable to reach MRT station due to missing first/last mile links) | TfSE | 3 | 4 | **12** |
| Political Risk | Policy is driven by political agenda and changes in political leadership might impact the realisation of project and benefits | Likely | Keep all political stakeholders appraised of programme benefits and progress | TfSE | 4 | 3 | **12** |
| Design, Information & Engagement | High level nature of specification of package interventions inherently carries risks associated with implications of ultimate design, which will be confirmed at a later stage and stakeholder opposition | Very Likely | Set up and keep updated a package specific risk register as soon as practical and communicate benefits clearly | TfSE | 4 | 3 | **12** |

# Draft Risk Register

| Risk | Impact | Likelihood | Mitigation | Owner | P | I | Risk |
|---|---|---|---|---|---|---|---|
| Operational | Package of Interventions need to be defined in more detail to confirm operating company's interest in participating in their delivery | Likely | Define the scope of the intervention in further detail and consult operating companies on viability and interest | TfSE | 3 | 3 | **9** |
| Reputational Risk | Risk related to misperceptions over timescales, nature of interventions and their impacts | Likely | An information management plan should be drafted including the level of information access and protection of sensitive information, with clear definition of roles and responsibilities for disseminating information | TfSE | 3 | 3 | **9** |
| Health and Safety | Risk of project delays and costs resulting from exposure to future waves of COVID-19 and health and safety of staff working on Package development | Likely | Each organisation involved should keep a risk register and sign up to TfSE risk management processes. Each organisation should follow UK government advice on COVID-19 related practices in relation to the work environment | TfSE and other parties involved | 3 | 2 | **6** |

# For further information please contact

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TRANSPORT FOR THE South East

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