



SOLENT
LOCAL
ENTERPRISE
PARTNERSHIP

SOLENT STRATEGIC TRANSPORT INVESTMENT PLAN

May 2016



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FOREWORD

Since the publication of our Growth Strategy in January 2015, we have been working hard to help this world-class area achieve its full potential.

The Solent Strategic Economic Plan (SEP): Transforming Solent aims to place the Solent on a new and transformative growth trajectory and in order to do this we have set ourselves ambitious targets for growth and productivity. Meeting this aspiration requires the area to create conditions that support growth. We have recently published a Productivity and Growth Supplement, which highlights the need for significant investment to modernise our transport system, recognising that transport has a vital role to play by bringing businesses and people closer together and fostering the agglomeration economies that make cities work. Transport connects people to jobs and products to markets, it underpins supply chains and logistics networks, and it is fundamental to domestic and international trade. The connectivity, condition and capacity of our transport network is therefore critical for improving productivity and increasing wealth creation. Key to this will be the need to identify intelligent transport solutions to support the area's ambitions.

We have already agreed a £151.9m Solent Growth Deal with government, funding a number of new infrastructure and skills capital projects starting in 2015. Furthermore, government has worked with Solent LEP and local partners to create the Solent Strategic Land and Infrastructure Board (SSLIB) to take a strategic view of public land and property in the area, and to support the joint planning and delivery of transport.

We are pleased to see some early results from this work with the announcement by Highways England in September 2015 of major upgrades to the Strategic Road Network over the next five years, including enhancing capacity on the M3 between Winchester and Southampton, enhancing capacity on the M27 between Southampton and Fareham through SMART Motorways, a comprehensive improvement to the strategic freight route interchange at Junction 9 of the M3 with the A34, and junction improvements around Southampton on the M27 and M271, improving access to the Port of Southampton.

This document seeks to provide a strategic investment framework for the area and it seeks to inform the refresh of our Solent Strategic Economic Plan (SEP). It will also inform further dialogue with government, enabling us to build on the investment commitments already made, with a view to securing a greater level of commitment to collective planning and delivery of strategic transport across all modes in the Solent and connecting the Solent to its markets.

This document underpins the Solent Strategic Economic Plan (SEP) and should be read alongside the SEP and our Productivity and Growth Supplement, as well as alongside, local transport

* **Transport Delivery Plan:** <http://documents.hants.gov.uk/transport-for-south-hampshire/TransportDeliveryPlan.pdf>
Local Transport Plan 3 Joint Strategy for South Hampshire: <http://www3.hants.gov.uk/local-transport-plan-strategy-south-hampshire>
Island Transport Plan: <https://www.iwight.com/azservices/documents/1190-ftp-strategy-v1.pdf>

investment and strategic plans* and at a central government level, alongside the investment and strategic plans of Network Rail** and Highways England*** as well as the investment plans of both local public transport operators and regionally significant private commercial transport infrastructure operators including both airport and ports.

This plan sets out a clear and bold ambition that in the period to 2040 we support and prioritise strategic transport investment in the Solent that will underpin the development of the Solent so that it can achieve its economic potential. The Plan focusses on those economically transformative and longer term investments necessary to support and unlock the Solent's growth potential over the next 25 years, with a metro-style public transport service connecting our cities playing a central role, alongside improved rail connectivity to London. It is recognised that alongside this we need to embrace new and emerging innovations in transport including the adoption of autonomous and driverless solutions. It is our intention that these creative opportunities underpin the development of our transport investment proposal as we move forward.

** **Wessex Route Specification:** http://www.networkrail.co.uk/Network_specification_Wessex.aspx

Control Period 5 Delivery Plan: <http://www.networkrail.co.uk/publications/delivery-plans/control-period-5/cp5-delivery-plan/>

*** **Roads Investment Study:** <https://www.gov.uk/government/publications/road-investment-strategy-for-the-2015-to-2020-road-period>. **Highways England Delivery Plan:** https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/424467/DSP2036-184_Highways_England_Delivery_Plan_FINAL_low_res_280415.pdf

**** Including the adoption of driverless vehicles

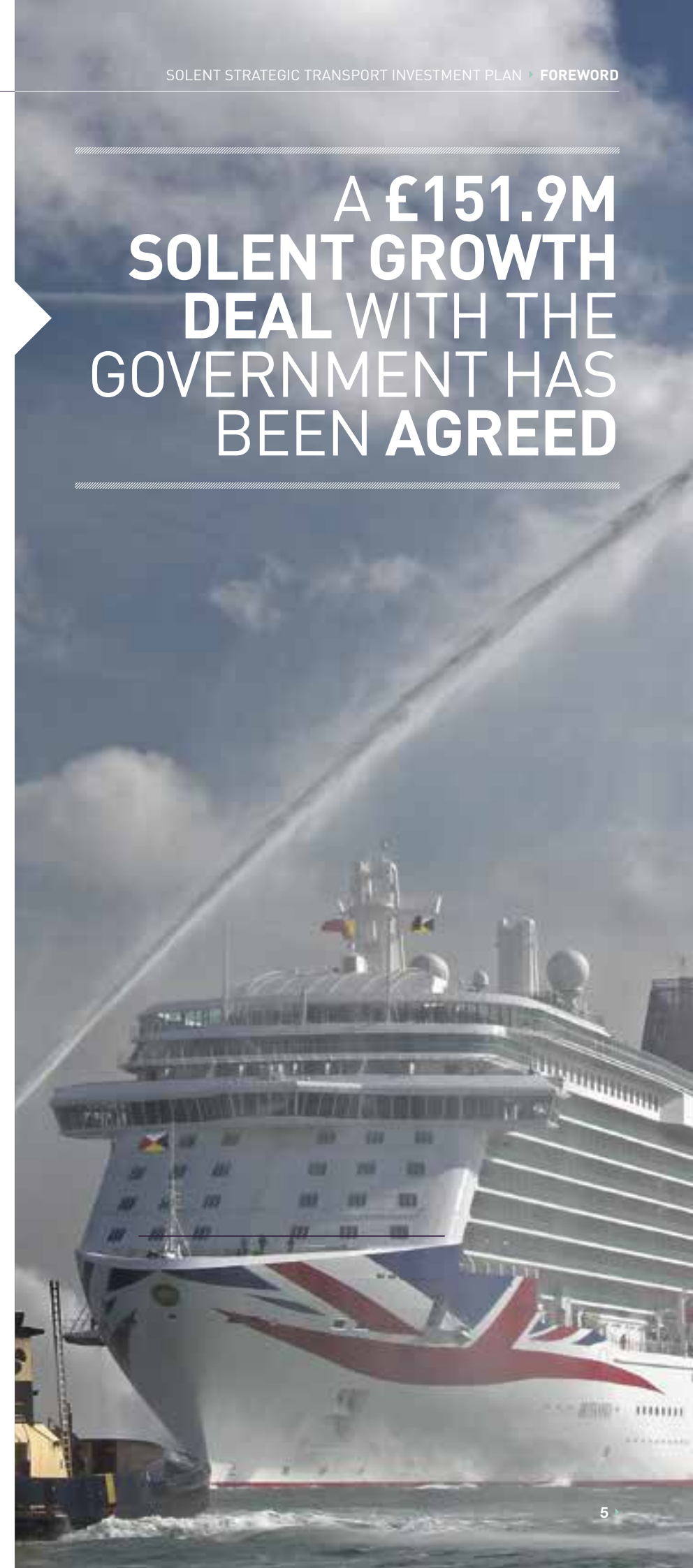
Moving forward, with the continued thrust towards devolution and the agreement of devolution deals nationally as well as a devolution deal under negotiation locally, there is a unique opportunity to secure support from government for the local area that underpins the aspirations and ambitions of residents and businesses in the Solent. Our strategy remains focussed on securing high growth opportunities for the Solent, working with the business community, individual businesses, local key partners such as Solent Transport, as well as central government and its agencies. This Strategic Transport Investment Plan provides a framework within which we can accelerate the delivery of the Solent Strategic Economic Plan, increasing productivity in the area and enabling the economy and people of the Solent to achieve their full potential.

This document has been developed in a changing environment and will be updated to reflect changes in the local economy, new innovations in technology****, as well as the need to respond to new local growth opportunities that may come forward under devolution.



Gary Jeffries
Solent LEP Chairman

A £151.9M SOLENT GROWTH DEAL WITH THE GOVERNMENT HAS BEEN AGREED



INTRODUCTION

In 2014, as part of the process to agree Solent’s Local Growth Deal with the UK Government, the Solent Local Enterprise Partnership (LEP) produced a Strategic Economic Plan (SEP) to outline a transformative vision for the future growth of the local economy.

Central to this vision is the need for a modern and resilient transport network that can enable the region to fulfil its economic potential by providing the conditions that enable businesses and people to thrive and productivity to increase. To this end, the LEP has worked in partnership with AECOM to produce a Strategic Transport Investment Plan that can support the area and its two major economic engines, Southampton and Portsmouth, to succeed and grow in a globally competitive economic environment.

It is essential that the Solent is not complacent about achieving a successful and sustainable economic future. In particular, it cannot afford to ignore the critical role that transport infrastructure and operations play in connecting key economic inputs – housing, skills, investment and innovation – to drive future economic growth.

Furthermore, efficient and effective transport infrastructure and operations are fundamental to attracting and retaining a highly-skilled labour force which is increasingly mobile in an ever more globalised economy. If the Solent area aims not just to maintain but to grow its comparative economic strengths, they must act now to produce and deliver a strategy for a transport system that reflects the goals and ambition of the area.

This Plan outlines a series of transformative evidence-based proposals which AECOM has produced from wide-ranging consultation, review of research and new analysis that have found the need and desire for investment in a transport system for the Solent which can help deliver strong and sustainable economic growth. It highlights a range of transport solutions that can act as the focal point of a strategy for ensuring that the region can continue to attract inward investment, develop business clusters, nurture local skills and talent, and build on existing assets in order for the area to successfully compete with similarly sized conurbations in the UK and abroad, and deliver a transport system befitting of the size, strength and aspiration of the region.

This Strategic Transport Investment Plan outlines the economic potential and current performance of the Solent, the likely trends of future growth and the existing transport challenges the area faces. Drawing from available evidence, stakeholder dialogue and new comparative benchmarking, the Plan proposes an investment framework in which a series of investment packages have been identified. These packages could be implemented as the next steps on the road towards the Solent developing the necessary modern transport network that can enable it to achieve its economic potential.

Individual and larger versions of the maps provided in this document are available in a supplementary document.

A GROWING ECONOMY

01

An analysis of the Solent’s historic growth and future forecasts show that economic, land use and transport decisions are inextricably linked. The starting point for the Strategic Transport Investment Plan is a consideration of the nature, scale and potential of the Solent’s economy.

A GATEWAY BASED ECONOMIC STRUCTURE

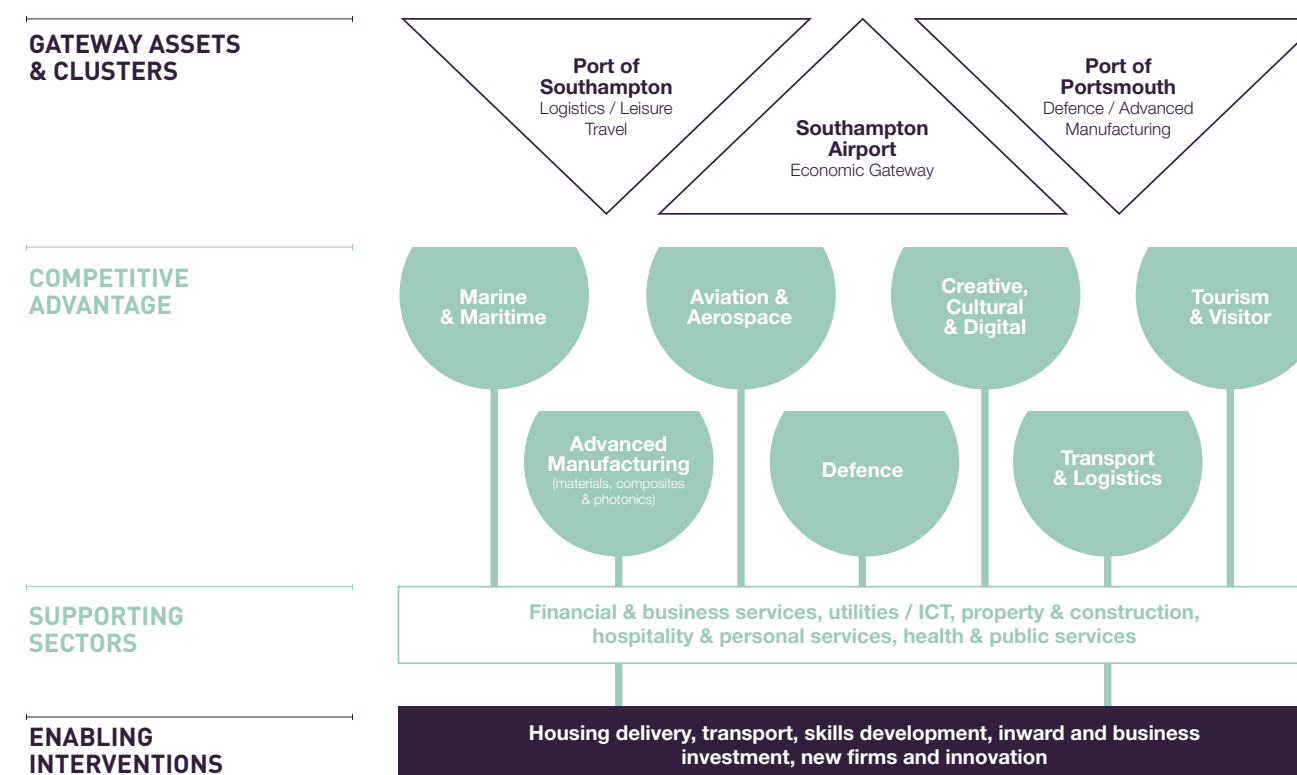
The Solent is a significant sub-regional gateway economy with strengths across a range of industries in the private sector. At £25 billion GVA, the annual economic output of the area accounts for one sixth of that of the whole of South East of England. Key economic strengths include high technology clusters, the SME base, a strong higher and further education

presence, as well as natural assets of green infrastructure and an attractive quality of life.

As a consequence of these economic assets, the three Solent “ports” and their respective cities contain important clustered sectors and concentrations of economic activity and smart specialisation,

most notably in the marine and maritime sector, and also in defence, logistics, and advanced manufacturing (including advanced materials and photonics), aerospace, and digital (creative and cyber security) are some of the principal industries which along with tourism benefit from the unique economic environment in the Solent.

Figure 1.1 Key sectors in the Solent’s Gateway Economy



As a consequence of these economic assets, the three Solent “ports” and their respective cities contain important clustered sectors and concentrations of economic activity and smart specialisation, most notably in the marine and maritime sector, and also in defence, logistics, and advanced manufacturing (including advanced materials and photonics), aerospace, and digital (creative and cyber security) and tourism are some of the principal industries which benefit from the unique and beneficial economic environment in the Solent. All of these industries are additionally supported by a wider supply chain that also serves local population based demand (Figure 1.1).

Nevertheless, in an era of global competition, economic assets are only ever relative and require continued investment in order to maintain their international attractiveness. Efficient and effective transport infrastructure is an essential component in the success and survival of economic clusters and the Solent must act now to strengthen its

comparative advantages across its key sectors to realise economic value.

LONG TERM POLYCENTRIC POPULATION AND HOUSING GROWTH

Before we can consider future growth, it is useful to review past trends in population and housing. According to ONS data, 1.6 million people live across the 12 local authority areas that either fully or in part from the Solent LEP area, whilst 1.3 million live within the boundaries of the LEP itself¹. Of the LEP population, more than 450,000 people (38%) are concentrated within the boundaries of Portsmouth and Southampton.

Between 1981 and 2014 the population across all 12 local areas has grown by 264,000 residents, a total increase of 20% or 0.6% annually, which is equivalent to adding around 8,000 people each year (Figure 1.2).

Long term population growth has been higher in the northern Solent areas. Eastleigh has grown by 39% between 1981 and 2014 adding 36,000 residents. Higher than average growth for the period was also the case for East Hampshire (28%), Fareham (28%), Test Valley (30%) and Winchester (28%) (Figure 1.3).

Figure 1.2 Aggregated population in the Solent area (total population (1981 – 2014)

SOLENT POPULATION 1981 -2014

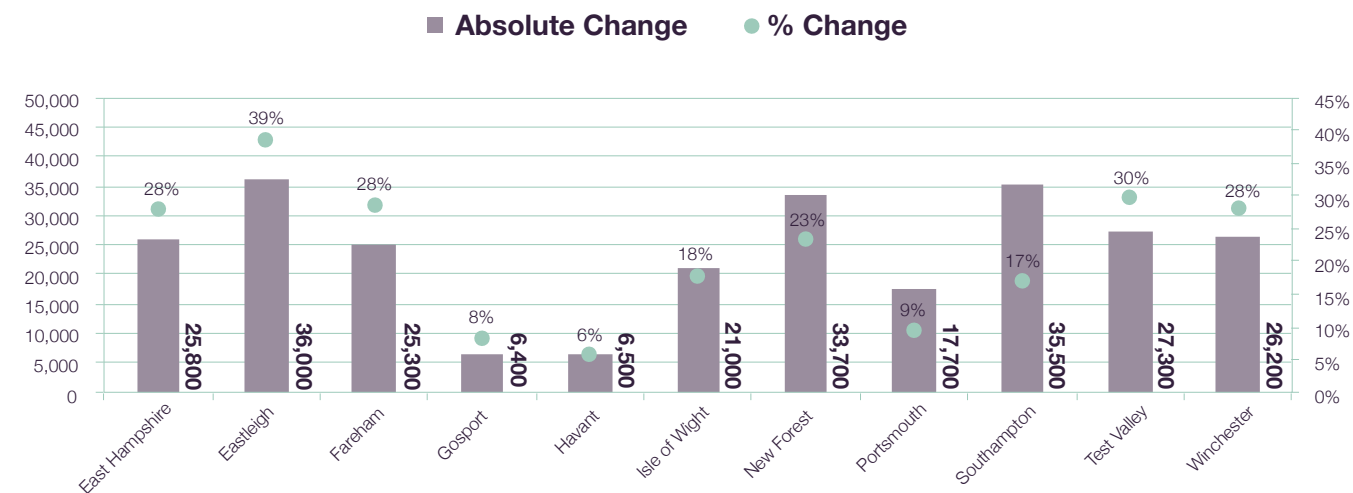


Source: ONS, AECOM analysis.

¹ The Solent LEP area includes the unitary authorities of Isle of Wight Council, Portsmouth City Council and Southampton City Council; Hampshire County Council and Eastleigh Borough Council, Fareham Borough Council, Gosport Borough Council, Havant Borough Council and parts of East Hants District Council, New Forest District Council, Test Valley Borough Council and Winchester City Council.

Figure 1.3 Population change across Solent areas (1981 – 2014)

POPULATION CHANGE BY LOCAL AREA 1981 - 2014



Source: ONS, AECOM analysis.

The long term trend seems to be the emergence of an increasingly polycentric area with population spread more widely across the area and some decline in the proportion of population accommodated in Portsmouth and Southampton which only grew by 9% and 17% respectively over the same period. However, in absolute terms, the cities have still played a significant role in absorbing growth. For example, from a low of 202,000 people in 1988 Southampton had grown by 44,000 people by 2014 (+22%) (Figure 1.4).

Strong but polycentric population growth, combined with evidence of clustered economic development, implies that transport infrastructure will play a critical function in providing satisfactory links between homes and jobs. Ease or difficulty of commuting, and thus quality of the transport network, is frequently highlighted as a key factor in area-based economic competitiveness whilst also being important to the locational decisions of high skilled and highly mobile labour.

More recently, there have been around 4,000 house completions each year across the whole area. This is consistent with Solent LEP’s aims to have completed 24,000 houses by 2020, thus accommodating around 55,000 additional residents.

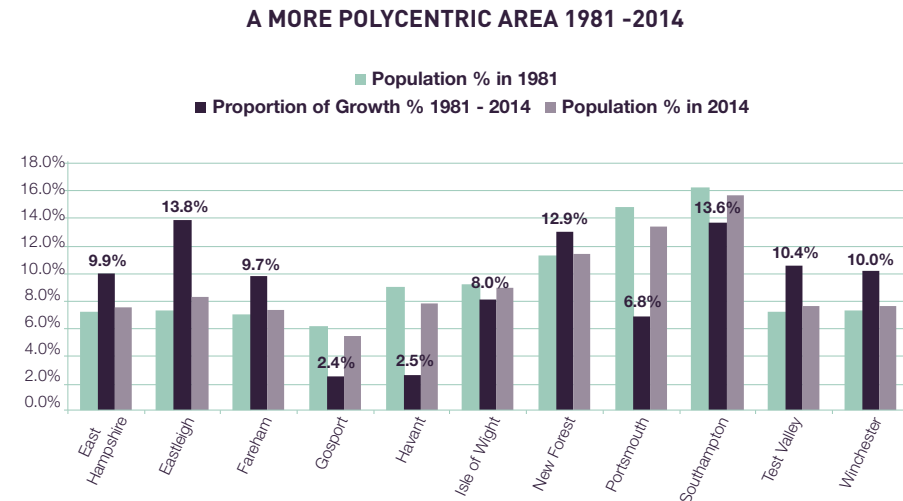
CURRENT FORECASTS ARE FOR INCREASING TRANSPORT DELAYS

The established evidence base (Appendix C) on transport issues in the Solent suggests that future growth will affect the economic performance of the transport network. Previous analysis (2013) has forecast that total car trips will grow by around 13% by 2026 and that the total time lost in delays will increase by more than 50% compared to current levels. Most delays currently occur in the urban areas on radial routes into the city centres, as well as within the city centres. And these problems are forecast to worsen in the future (Figure 1.5).

As a result, bus speeds into the cities and towns will continue to be low and variable. Furthermore, potential locations for new housing and population growth are likely to require longer journeys to work and could reinforce car dependency unless improvements in alternative modes are delivered.

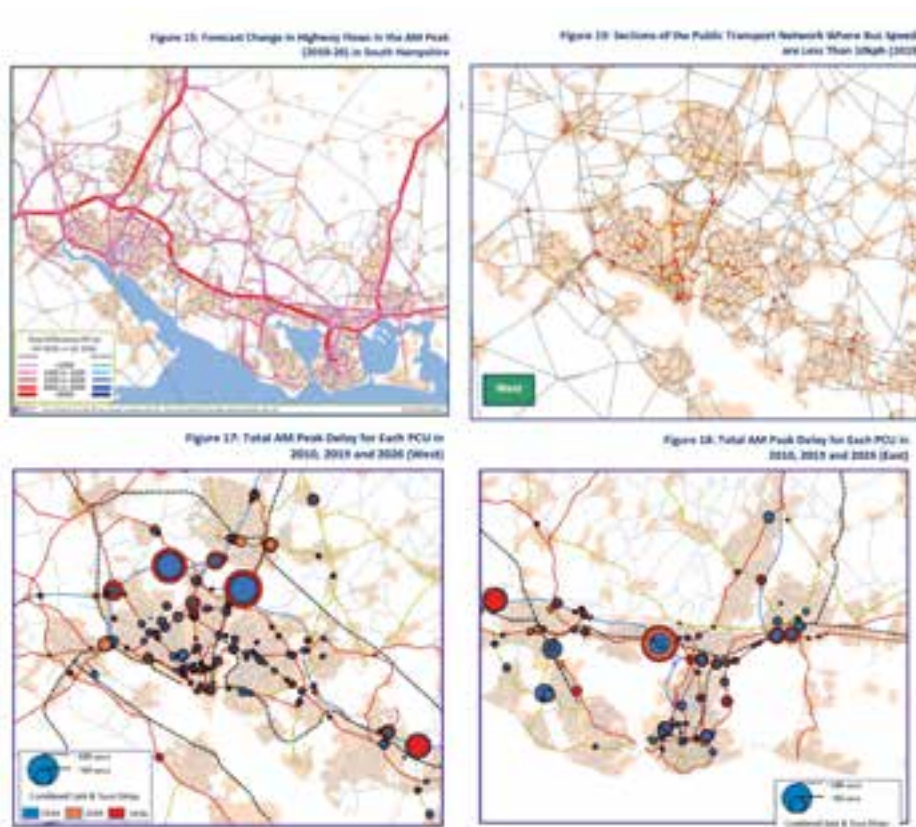
CAR TRIPS WILL INCREASE BY AROUND 13%

Figure 1.4 Growth trends by local area (1981 – 2014)



Source: ONS, AECOM analysis.

Figure 1.5 Forecast future increases in congestion on Solent road network



Source: Transport Delivery Plan 2012-2016, Transport for South Hampshire², 2013

²Transport for South Hampshire is now named Solent Transport.

RECENT FORECASTS INDICATE THE NEED FOR ADDITIONAL HOUSING

As well as the existing transport forecasts, it is necessary to consider the impacts of more recent independent economic projections completed for the Solent area.

In 2014 alone, employment in the Solent increased by 3% (+17,800 jobs), the strongest annual performance since 2002. However, recent independent forecasts by Oxford Economics (Spring 2015) have been updated and show that the area could potentially add 61,500 jobs by 2030 with GVA growing by 2.7% per annum to create a £40 billion economy (Figure 1.6). Employment growth is forecast across a number of sectors including professional, scientific, technical and support services, ICT, cultural and hospitality industries, retail and construction (Figure 1.7).

As a result, the proportion of local residents in employment is expected to increase, improving the local employment rate and reducing unemployment. However, population is also predicted to grow faster than earlier forecasts, expanding by 11% by 2030 and being driven by increased in-migration. Firms are forecast to absorb this growth by employing additional staff as long term productivity growth has not yet returned to pre-recession levels in the UK.

The forecasts therefore suggest that an additional 6,900 occupied homes will be required by 2020 and 16,400 by 2030 over and above earlier forecasts.

6,900 OCCUPIED HOMES WILL BE REQUIRED BY 2020

Figure 1.6 Total employment forecast in the Solent to 2030, update vs previous (Oxford Economics)

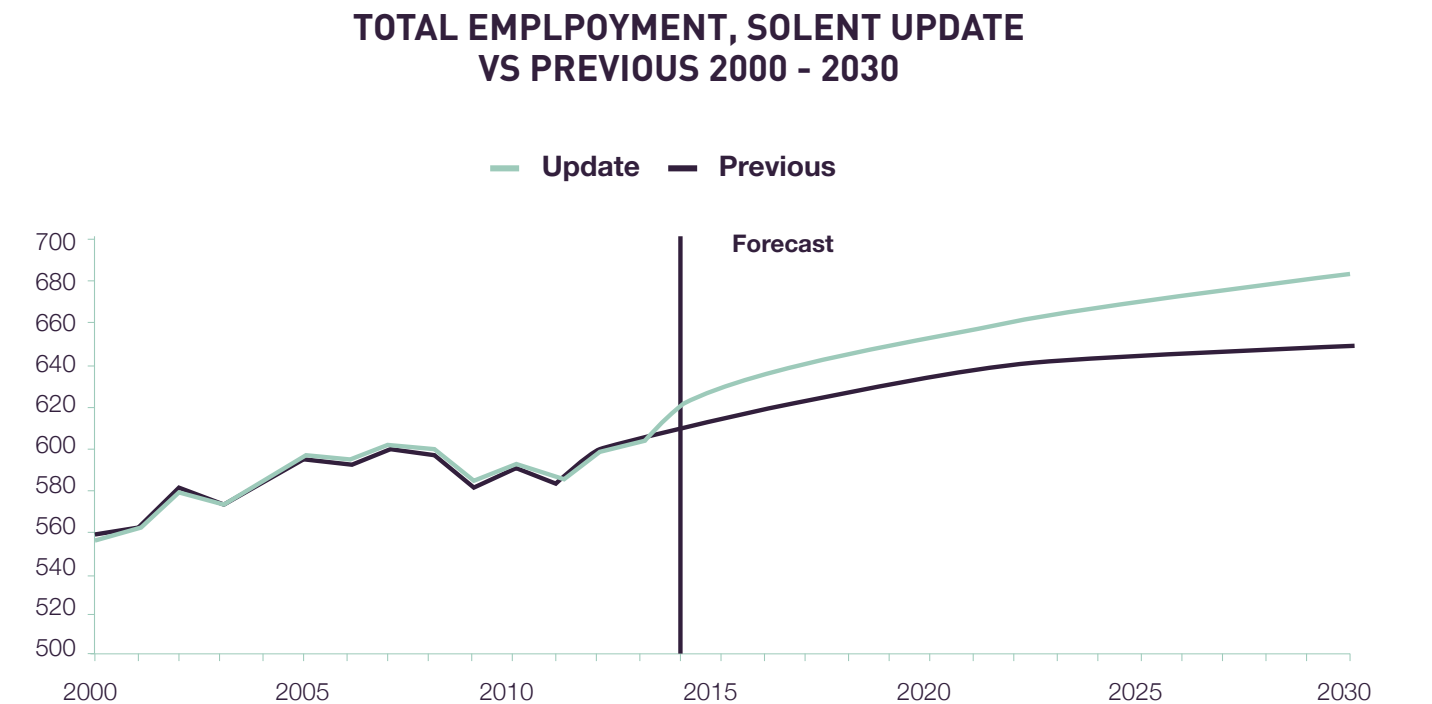
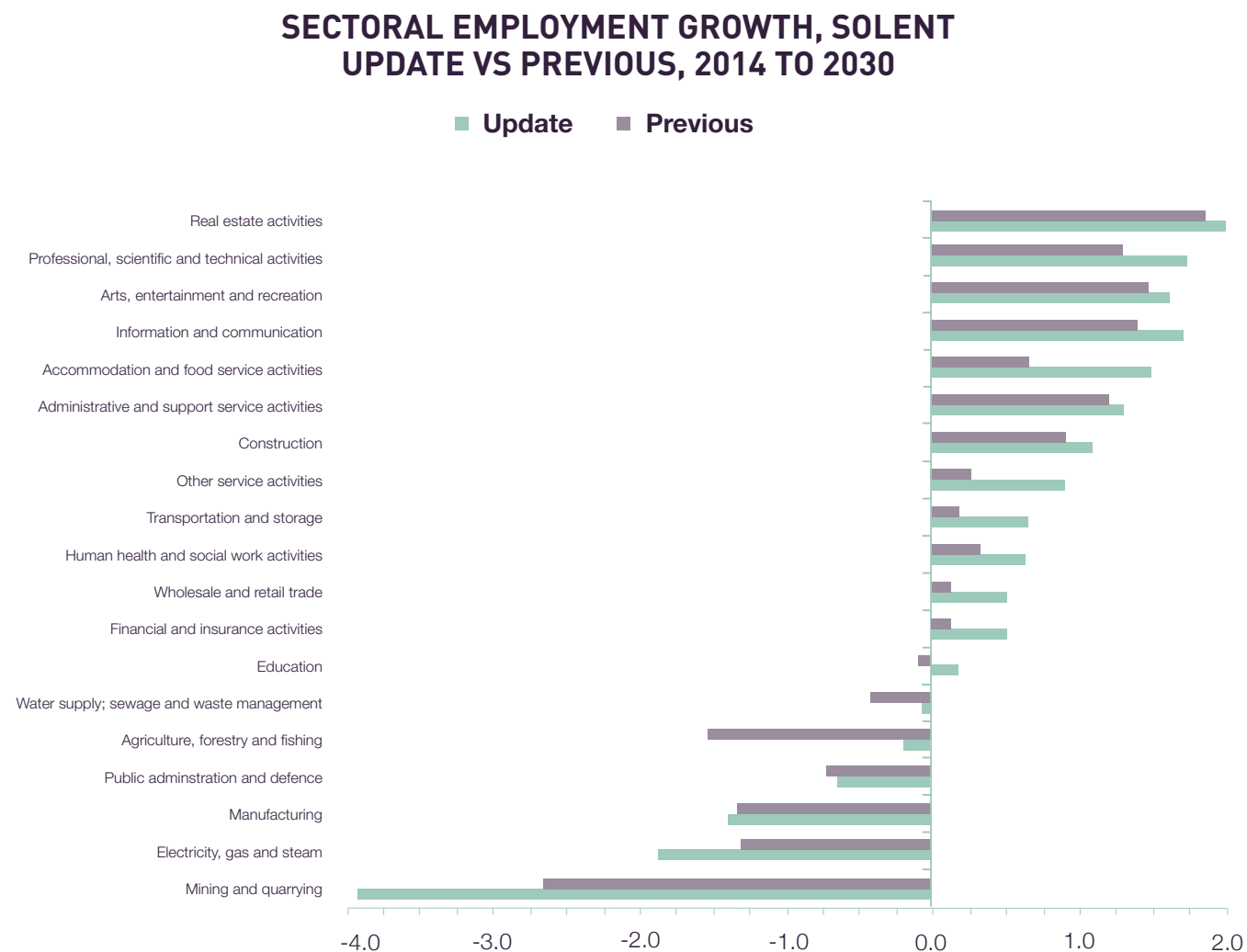


Figure 1.7 Percentage change in sectoral employment growth to 2030, update vs previous (Oxford Economics)



With high quality land and marine habitats that form a key element in the attractiveness of the Solent, a key consideration is the potential locations of new development. The various ecological and environmental constraints such as national parks, water protection areas and topography present in the area affect the location of growth in the Solent area (Figure 1.8). Current and future urban growth is therefore concentrated on a corridor between Portsmouth and Southampton and in towns on the Isle of Wight.

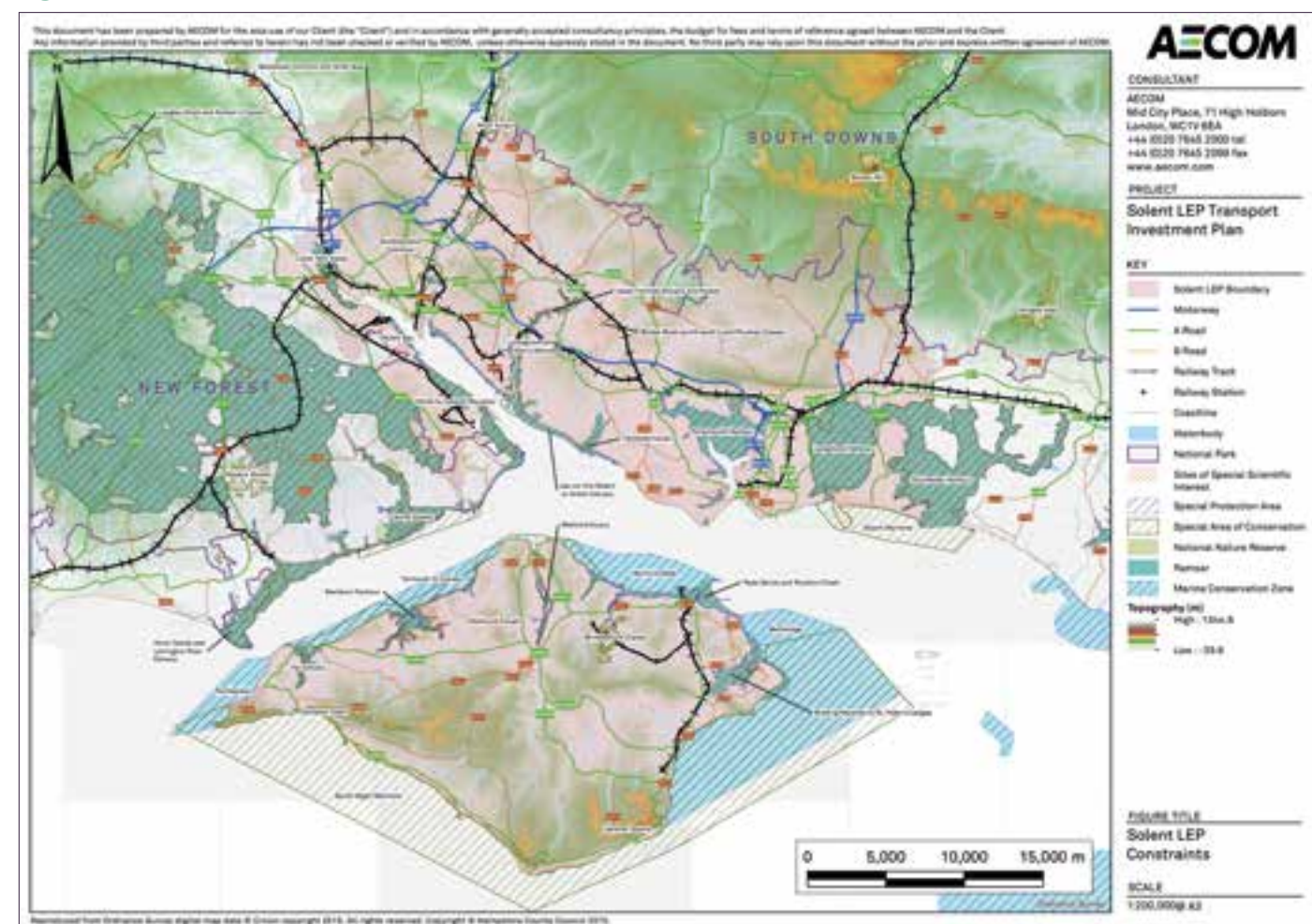
The significant growth potential and likely future housing demand sets the agenda for what future strategic transport investments must provide to ensure a growing and productive economy.

As well as population growth – natural and from in-migration – increasing housing demand arises from the needs of an ageing population and decreasing household size.

Working with local partners, AECOM has identified selected major potential development sites across the Solent LEP area. We estimate that together they could accommodate 30,400 homes, around 70,000 new residents and 39,000 jobs by the early 2030s based on their current specification (Figure 1.9). There would also be additional provision on smaller sites across the Solent area.

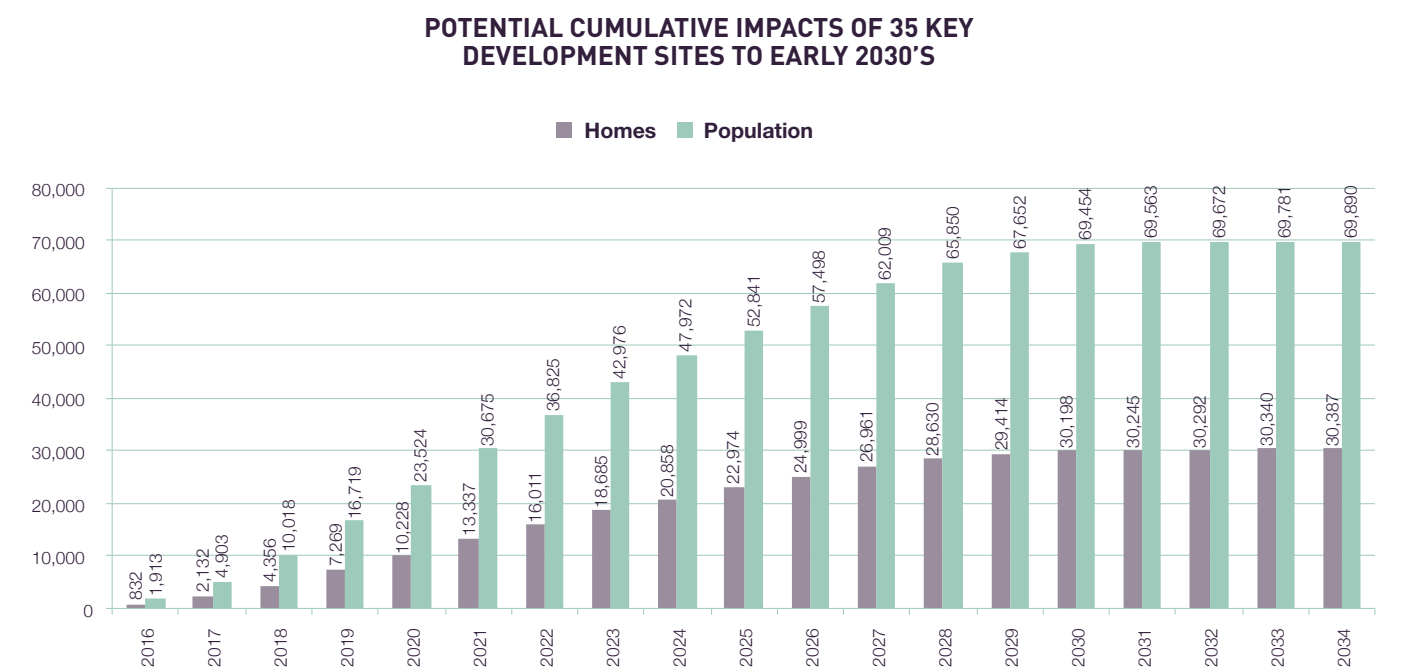
To support economic performance in the longer term, transport and land use planning needs to reflect this potential growth and consider the effects on the existing transport network.

Figure 1.8 Environmental constraints



Source: AECOM GIS.

Figure 1.9 Development potential on selected major sites



Source: Hampshire CC, Southampton CC, Eastleigh BC, PUSH, Solent Transport, AECOM analysis. Excludes small infill sites and the current PUSH Spatial Strategy Review is identifying further strategic locations.

THE SOLENT REQUIRES AN EFFICIENT AND WELL-FUNCTIONING MODERN TRANSPORT NETWORK

SUMMARY

The Solent has a clear potential for future and long term economic and productivity growth, with a strong asset base upon which to build. However, transport infrastructure is a comparative weakness and already a constraint for the area. Given transport's role as a fundamental component of area based economic success, the Solent cannot afford to be complacent in the delivery of a transport infrastructure network fit for an economy of its size and potential.

A competitive transport network is required in the Solent to ensure that it can remain internationally competitive in an increasingly globalised economy. Providing effective connections between people and businesses, their homes and jobs, as well as wider social infrastructure, is the only way that Solent will be able to fully support and achieve its economic potential.

Transport is an essential enabler of economic dynamism. Successful transport networks support businesses by facilitating the development of agglomeration economies, connecting supply chains, broadening labour markets and improving productivity for both goods and labour.

The Solent requires an efficient and well-functioning modern transport network that is integrated with an attractive urban realm and encourages a range of modal uses. This will be essential for creating an environment that is attractive to the high-skilled labour and high-value industries over which regions compete globally to attract and which underpin an area's enduring economic strengths.

TRANSPORT CHANGES

02

Ensuring the performance of the Solent's transport system and tackling current challenges is central to improving efficiency, to expanding and integrating labour and consumer markets and to supporting national supply chains.



Image: Solent Local Growth Deal Site - St Margaret's Roundabout

The current transport network and its operational performance are central to the Solent's economy and its comparative productivity. The current challenges for each major transport mode are considered below.

ROADS AND MOTORWAYS

The road network is critical for both the national and the local economy.

The Solent's motorways and principal road routes (M27/M271/M275/A27, M3/A34, A3) are key links for freight movements between the south coast ports, production centres and consumer markets further north as well as providing road connections to London.

However the performance of the network is weak. Average vehicle speeds are 32% lower than the national average³. The Solent experiences significantly lower morning peak-time vehicle speeds, particularly in Portsmouth and Southampton.

There are currently a number of points of stress on the motorway network which impact on the economic performance of the area. These are:

- the M3 J9/A34 : this is a critical node connecting Solent (especially freight) to production centres and markets in the north and the midlands but a major bottleneck.

- the M3 at Eastleigh : this is congested due to a mix of longer freight and short distance movements allied to junctions that are closely spaced.
- Congestion at M27 J3 although improvements completed in August 2015 should reduce congestion.
- Delays and road safety concerns around the M271/M27 junction.
- Capacity required between the recently improved J5 and the airport and its environs.
- Capacity issues along the M27, particularly between J4 (M3) and J8 (Netley), J9 (Whiteley) at J10 (Fareham North), and at the A27/A2030 junction which impacts on local traffic and freight movements.
- Capacity constrains along the southern section of the M275.

Over the next 30 years forecasts made by Transport for Southern Hampshire (TfSH)⁴ show increasing congestion at the key pinch points on the strategic road network and on the key approaches to the city centres⁵.

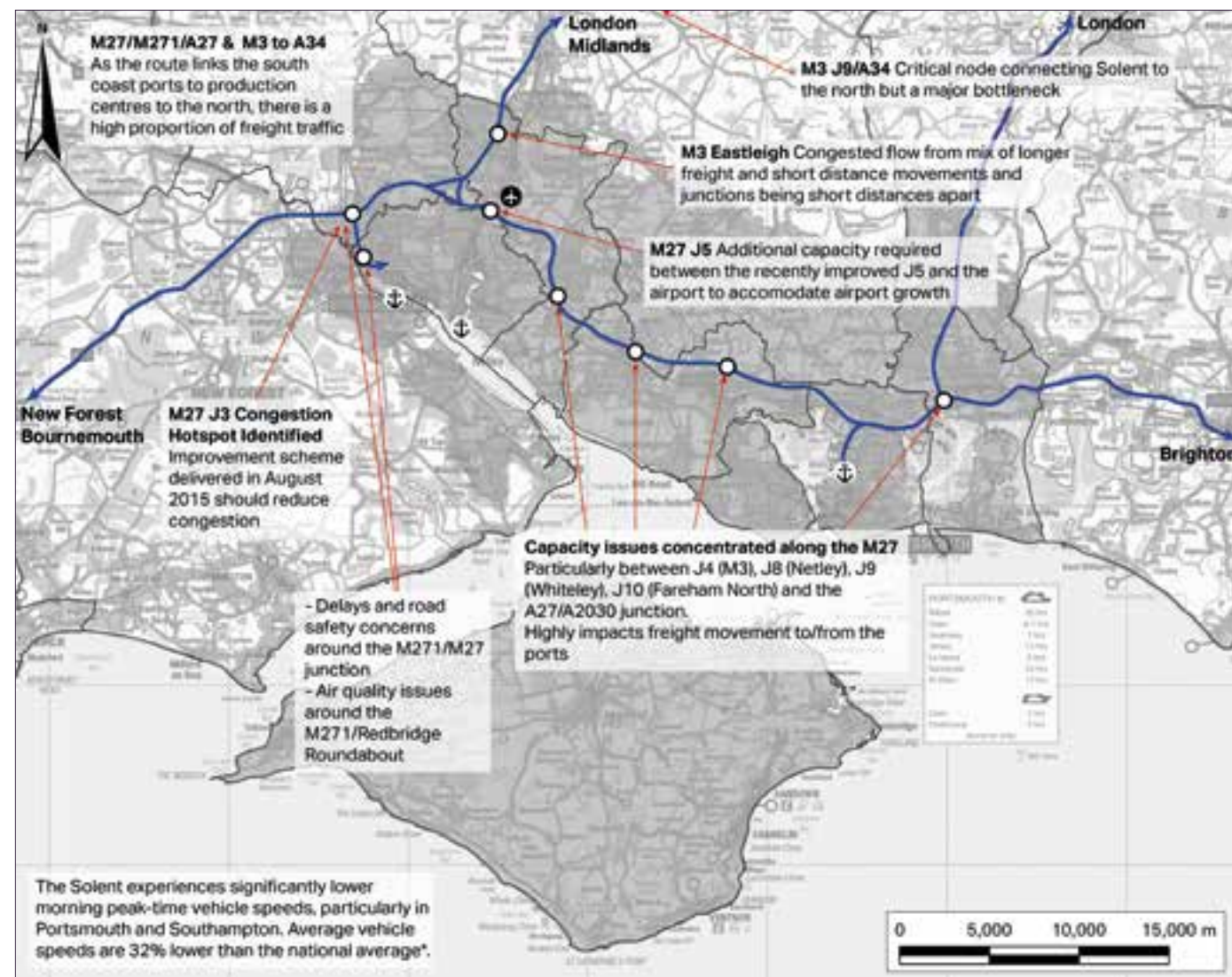
³ LEP Network (2012) - Creating Successful Local Economies.

⁴ Transport for Southampton Hampshire (TfSH) is now named Solent Transport.

⁵ Transport Delivery Plan, Transport for South Hampshire (2013).

AVERAGE VEHICLE SPEEDS ARE 32% LOWER THAN THE NATIONAL AVERAGE

Figure 2.1 Strategic road network opportunities and constraints



Source: Solent LEP / AECOM.

RAIL

The Solent has a rail network which covers much of the current developed area though there are some key exceptions.

In terms of connectivity, rail journey times from Portsmouth to Waterloo are between 96 and 109 minutes (via Guildford; 3 trains per hour), 129 minutes (via Winchester, 1 tph off peak) and around 118 - 128 minutes to London Victoria (1 tph). Southampton to Waterloo is between 80 and 100 minutes (3 tph) and services to London Paddington between 88 and 95 minutes with an interchange at Reading (2tph). There are a number of specific factors affecting the Solent's relative access to London and the wider south east economy identified in consultation and from stakeholders:



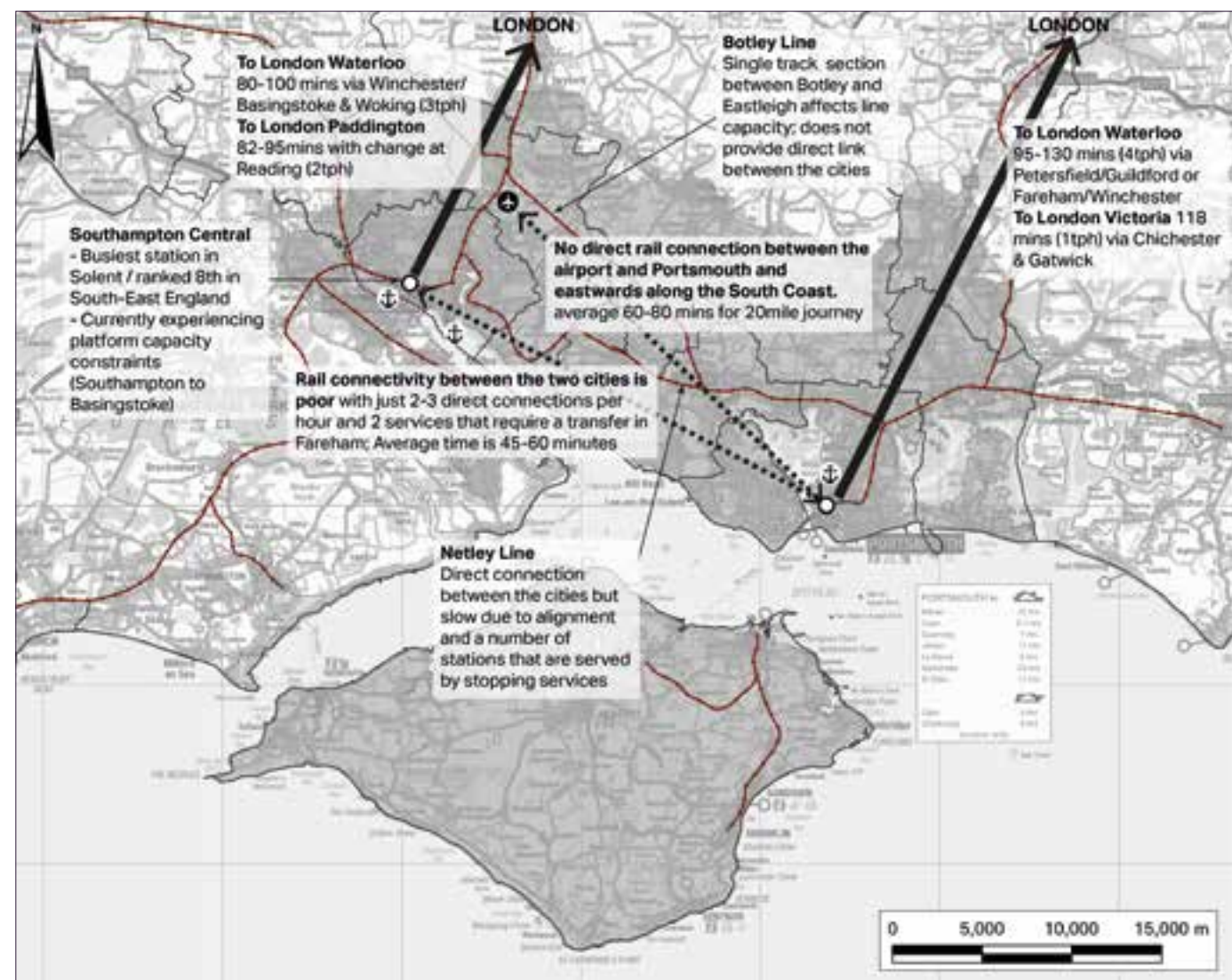
Image: Eastleigh Railway Station

- There are relatively poor journey times from the Solent to London due to track congestion, capacity constraints at Waterloo and Clapham Junction and comparatively slow line speeds.
- There is no direct rail connection between Southampton airport and Portsmouth and eastwards along the South Coast.
- Business regards the journey time between the two main cities as slow: the best journey time (1 tph) is 45 minutes, the other two hourly services take 60 minutes (one requiring a change) for a 20 mile journey. This is in part due to the number of stations served on the Netley Line.
- The utilisation of the current rail network is high on a number of rail routes across the Solent area.
- There are good regional connections from the area but journey times are slow compared to similar cities and economic gateways in the UK.
- Rail freight plays a major role to and from Southampton but existing and increased mode share is dependent on Strategic infrastructure schemes such as the "Electric Spine".
- There is no passenger rail access to Southampton Waterfront area, which is expected to see significant growth.
- There is limited interchange in Southampton between existing and relocated Isle of Wight ferry terminals to the wider Solent area by Public transport.
- There is poor public transport access to Southampton Cruise terminals and the Port from wider Solent and the airport.
- Future of the Island Line needs to be urgently considered in the context of life expired rolling stock and infrastructure.⁶
- Rail access to Gosport - One of the largest towns in the UK not to be served by rail.

⁶ The Island Line forms part of the South Western Franchise, but operates under a separate Lease Agreement with Network Rail rather than an Access Agreement. Responsibility for infrastructure maintenance and renewals is shared between the operator and Network Rail under this lease, which is due to expire in 2019. In approaching the re-letting of the South Western franchise, a key objective of the Rail Executive is to secure an appropriate, financially sustainable long term future for the Island Line.

RAIL JOURNEY TIMES FROM PORTSMOUTH TO WATERLOO ARE BETWEEN 96 AND 109 MINUTES

Figure 2.2 Strategic rail network opportunities and constraints



Source: Solent LEP / AECOM.



Image: Southampton



Image: Portsmouth

PORTS AND FERRIES

The Port of Southampton is the UK's second largest container terminal Europe's and the most efficient container port in Europe. It is the UK's busiest cruise port, and the UK's primary automotive export hub, providing a critical gateway for our resurgent automotive manufacturing industry. From the Port of Southampton about 65% of containers are moved onwards by road and 35% by rail with over 22 freight trains a day to key inland destinations. Direct motorway access (M271, M27, A33 and northwards via M3, A34) accommodates the road freight movements. However cruise passengers mainly reach the terminal by car and the port's growth is constrained by limited expansion space and road capacity.

The Port of Portsmouth is one of the UK's leading Ro-Ro ports and is home to the Royal Navy, including a major naval base which lies at the heart of the sub-regional defence cluster (with the new QE class aircraft carriers arriving in 2017) and a hub for refrigerated ships.

Six passenger services and three car ferry services provide vital connections to the Isle of Wight from the mainland Solent area.

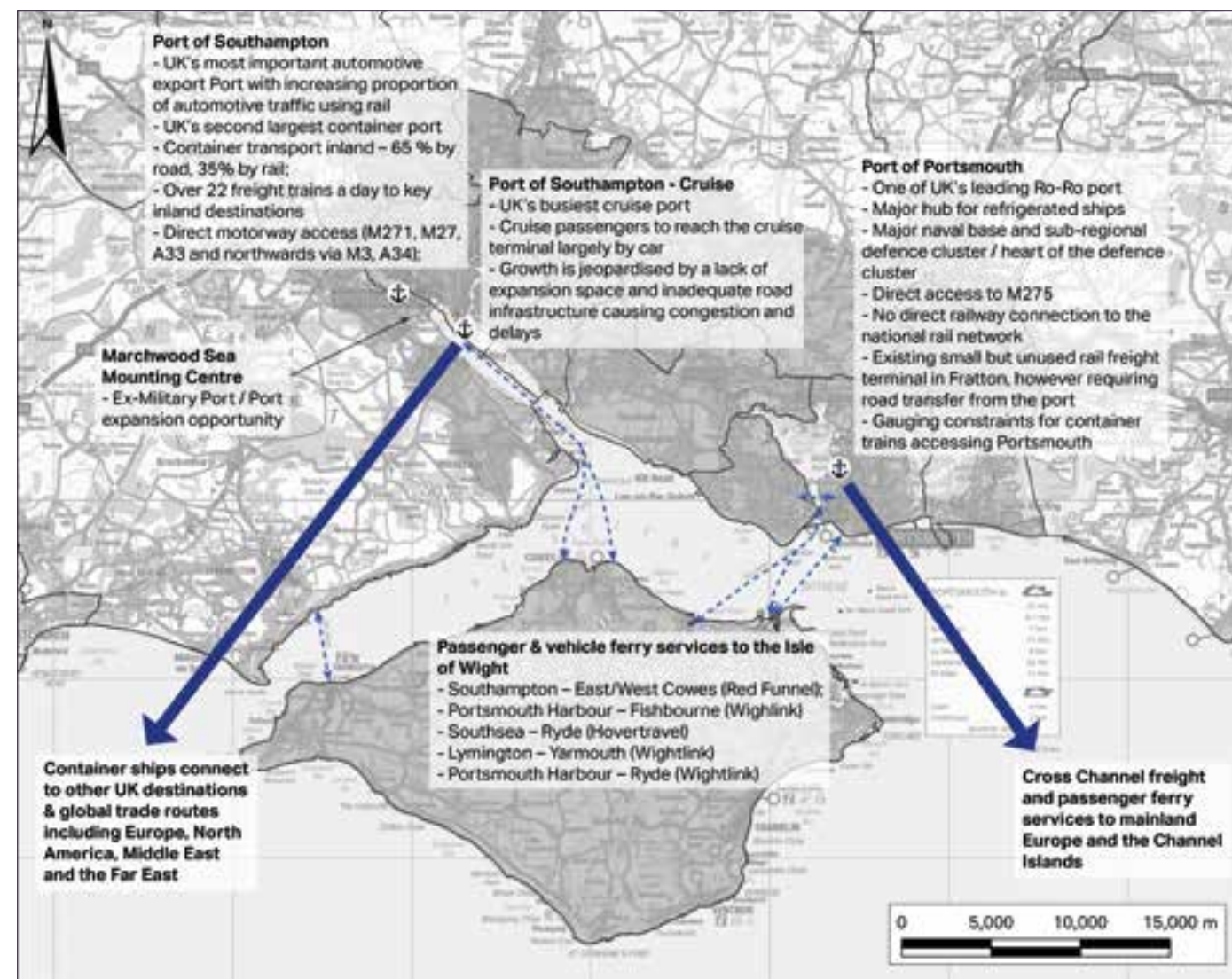
Consultation with stakeholders and businesses identified the following opportunities and challenges:

- The continued growth and expansion of the port of Southampton is dependent on the capacity and availability of road and rail space and effective connections to the strategic networks (e.g. freight northwards).

- Better integration of modes between ferries and other public transport offer potential and will have an impact on the economies of Southampton and the Isle of Wight as well as supporting the increased use of public transport.
- Greater access options to the cruise line terminals and links to airport would improve the offer and reinforce the role of Southampton as the leading cruise terminal.
- The Port of Portsmouth suffers from no direct connection to the national rail network.

SIX PASSENGER SERVICES AND THREE CAR FERRY SERVICES PROVIDE VITAL CONNECTIONS TO THE ISLE OF WIGHT FROM THE MAINLAND SOLENT AREA.

Figure 2.3 Ports opportunities and constraints



Source: Solent LEP / AECOM.



Image: Southampton Airport

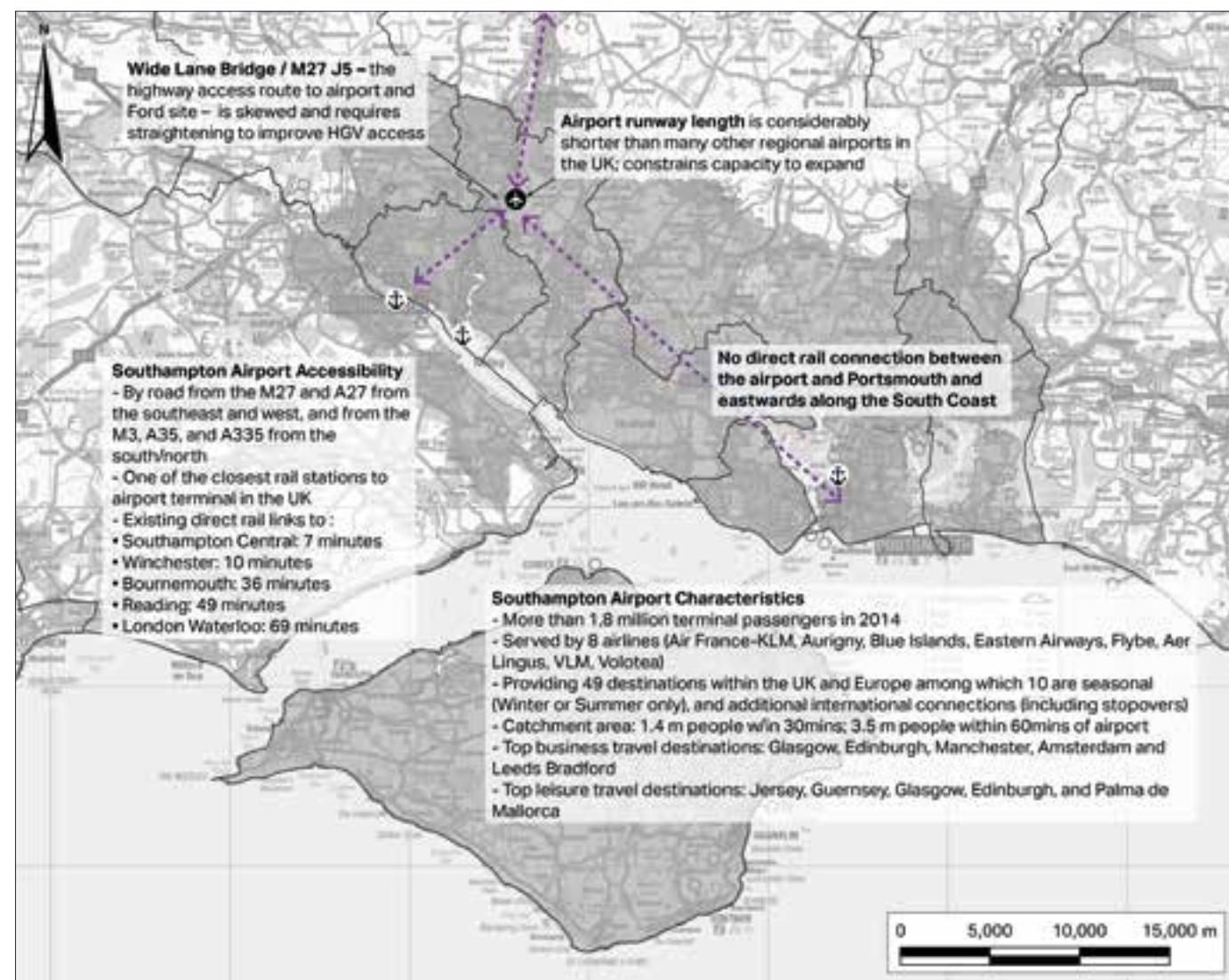
AIRPORT

With eight airlines, Southampton Airport serves up to 49 short haul UK and European destinations for business and leisure travellers (e.g. Glasgow, Manchester, Amsterdam, Jersey and Mallorca). About 1.4 million people live within 30 minutes of the airport and 3.5 million within an hour. The airport has one of the closest rail stations to a terminal in the UK and is adjacent to the M27 so is increasingly used as a rail park and ride. Yet a number of transport constraints affect the economic performance of this asset:

- The airport runway length is shorter than many other regional airports limiting the range of aircraft that the airport can handle.
- Despite quick and direct rail connections to Southampton Central (7 min) and Winchester (10 min), there is no direct rail connection between the airport and Portsmouth (the journey time is 60-80 minutes for a journey of 20 miles) and eastwards along the South Coast (apart from one train a day to Brighton).
- Locally the road network around the airport and surrounding development sites (including a major development opportunity at the former Ford manufacturing site) is comparatively constrained with a number of narrow and/or old bridges.

SOUTHAMPTON AIRPORT SERVES UP TO 49 SHORT HAUL UK AND EUROPEAN DESTINATIONS

Figure 2.4 Southampton airport opportunities and constraints



Source: Solent LEP / AECOM.



Image: Wightlink Ferry
 Credit: Portsmouth City Council

ISLE OF WIGHT

The connection between the Isle of Wight and the mainland is based on six passenger and three car ferry services from Lymington to Yarmouth (Wightlink), from Southampton to East and West Cowes (Red Funnel, Red Jet), from Portsmouth to Fishbourne (Wightlink), Ryde (Fast Cat) and from Southsea to Ryde (Hovertravel).

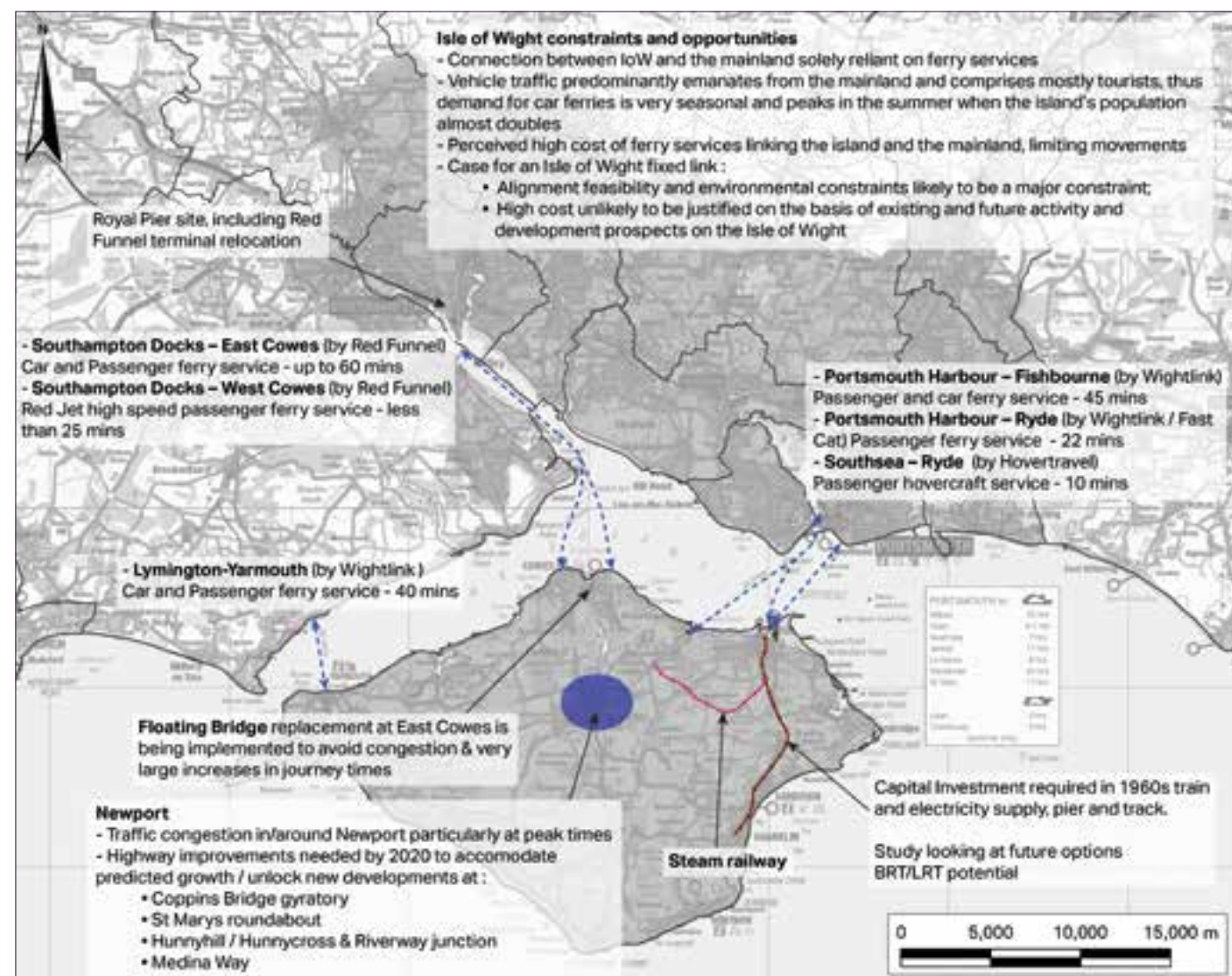
Vehicle traffic predominantly emanates from the mainland and comprises mostly tourists, thus demand for car ferries is very seasonal and peaks in the summer when the island's population almost doubles.

Within the Isle of Wight there are a number of transport issues affecting its economic performance:

- Improving cross Solent connections through better interchanges on both sides.
- The floating bridge in East Cowes is scheduled to be replaced, avoiding forecast increased journey times.
- Significant traffic congestion in and around Newport at peak times.
- The operational future and viability of the Island Line rail service⁶.
- In addition, local traffic issues and support for active modes schemes form a key part of local transport initiatives.

⁶ The Island Line forms part of the South Western Franchise, but operates under a separate Lease Agreement with Network Rail rather than an Access Agreement. Responsibility for infrastructure maintenance and renewals is shared between the operator and Network Rail under this lease, which is due to expire in 2019. In approaching the re-letting of the South Western franchise, a key objective of the Rail Executive is to secure an appropriate, financially sustainable long term future for the Island Line.

Figure 2.5 Isle of Wight opportunities and constraints



Source: Solent LEP / AECOM.

Figure 2.6 Travel to work movements in the Solent in 2011



Source: Solent LEP / AECOM.

CURRENT MOVEMENT PATTERNS

Evidence from the 2001 and 2011 Census suggests that there are high levels of movement between the Solent districts for work and other journey purposes, which give rise to significant volumes of intra-Solent trips, contributing to traffic issues on the local and strategic networks. In 2011, 86% of people residing in one of the Solent's twelve constituent districts also had their workplace in one of these districts, showing a high level of employment self-containment within the Solent area.

Between 2001 and 2011 the degree of self-containment ("live and work in the same place") has fallen in Portsmouth from 73% to 65% and from 66% to 56% in Southampton. This decline in self-containment in the main cities, which is most likely related to housing market differentials and the location of new employment opportunities, suggests that the transport network will need to accommodate more inter-node journeys in the future

Other areas of the Solent LEP feature relatively low levels of self-containment such as Fareham (36%), Eastleigh (37%), Gosport (39%) or Havant (42%) which are net exporters in 2011, supplying workers to main towns and cities across the Solent area. Unsurprisingly, Fareham, Gosport and Havant are supporting Portsmouth's job market with respectively 17%, 18% and 24% of their residents working in Portsmouth; Eastleigh is feeding Southampton's job market with 20% of its residents working in Southampton.

SELF-CONTAINMENT HAS FALLEN IN PORTSMOUTH FROM 73% TO 65% AND FROM 66% TO 56% IN SOUTHAMPTON.



Image: Solent Local Growth Deal Site – Station Quarter in Southampton

SUMMARY

There is a range of challenges affecting most modes of transport in the Solent area which is unsurprising for a growing area. While the challenges affect the current performance of key economic strengths there are opportunities to ensure these modes can further support the Solent to fulfil its long term economic potential.

The growing number of journeys by car and reduction in comparative self-containment is contributing to the current congestion levels and poor accessibility for business in the area. The growth of both housing and employment will be constrained unless better integrated alternatives to car travel exist for both short and Solent wide journeys. These challenges will require a strategic transport approach that takes account of both local and longer distance transport investments.

COMPARATIVE BENCHMARKING

03

Despite being a fast growing economy Solent LEP has a transport infrastructure deficit compared to many other city regions in the UK.

“DUAL CITY” BENCHMARKING

An economic-led vision for transport must consider the potential to improve the performance of the two main cities in the Solent area at the same time as enhancing their local regional connections to reduce barriers to trade, widen labour markets and secure agglomeration benefits.

To examine comparative performance, the Solent area was benchmarked against other “dual city” areas in the UK where two major cities were roughly an hour apart in journey times. Indicators assessed included:

- Recent population and employment growth
- Growth occurring within city boundaries
- Commuting patterns and mode of transport used
- Quantity of transport infrastructure provision by population
- Relative accessibility to London
- Local port and airport functions

The other comparator “dual city” areas were Manchester & Liverpool, Sunderland & Newcastle, Leeds & Sheffield, Derby & Nottingham, Edinburgh & Glasgow and Swansea & Cardiff. All detailed tables of results are available in Appendix B.

“DUAL CITY” BENCHMARKING RESULTS

Population growth and economic dynamism in the Solent exceeds the UK benchmarks. With a population of 1.6 million, the Portsmouth-Southampton dual area is larger than that of Swansea & Cardiff and could approach the scale of Sunderland & Newcastle and Derby & Nottingham over the next 20 to 30 years. Both population and employment are growing more rapidly than in all other benchmark areas. Per capita housing completions are double many other areas.

The Solent appears to be an emerging polycentric area with much population and jobs growth occurring outside Portsmouth and Southampton, with 40% of residents working in a different district to where they live. The recent population growth accommodated within the two main cities has been lower than other benchmarks. The Solent’s two main cities have accommodated smaller proportions of recent employment growth than other benchmarks.

There is a trend of living in Portsmouth and Southampton but commuting to jobs in the Solent area. The two main cities in the Solent area are less self-contained than some other benchmarks. A relatively high proportion of residents (10%) live within the two “main cities” but travel to work outside of them. The average for the other benchmarks was 6%.

The Solent area has a low public transport mode share and less well developed public transport system than benchmarks. Two thirds of residents travel to work by car in the Solent area, in line with other benchmarks, and the average commute distance of 10 miles is also broadly comparable. Total commuter travel is nearly at the level of Sunderland & Newcastle and Derby & Nottingham which have metro or tram systems. At just 8%, use of public transport to get to work is below the average of the other benchmarks (13%). A relatively higher proportion of people in the Solent work from home, cycle or walk to work.

Despite being a similar distance apart the labour market integration between Sunderland and Newcastle is much higher than between Southampton and Portsmouth. For the former the reciprocal labour market flows total around 12,000 people. In comparison the labour market flows between the Solent cities are just 3,100 (75% lower) showing the potential for market integration benefits.

Bus use, tram, metro and road provision all lag comparators indicating a significant all-mode transport infrastructure deficit. Both public transport and road provision seem to lag UK benchmarks. There are significantly lower bus journeys per person per annum – about half the average of comparators. There is no local tram or metro network in the Solent and there are significantly fewer miles of motorway and A-road per person.

Furthermore, population density is the most important indicator of potential public transport use. At 5,141 people per square kilometre, Portsmouth has the highest UK population density outside of London. Southampton is not far behind at 4,858 people per square kilometre. This indicates significant potential for public transport take-up.

Figure 3.1 Comparative use and provision of transport infrastructure (AECOM analysis)

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM
Annual bus journeys per resident	45	80	78	144	58
Miles of tram / metro network per million people	0	31	24	6	9
Miles of motorway per million people	26	31.6	15.4	45.8	0.1
Miles of A road per million people	14.3	49.4	112.9	65	16.1

Figure 3.2 Comparative accessibility to London by road and rail (AECOM analysis)

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM
Average minutes to London by rail	88	138	78	135	90
Average speed to London by rail (MPH)	53	87	24	82	79
Average minutes to London by road (mi)	78	217	271	177	125
Average minutes to London by road	105	210	275	195	140
Average speed to London by road (MPH)	45	62	59	54	54

In terms of distance the Solent area is closer to London than most of the comparators, but suffers from lower average speeds by both rail and road. This makes it relatively disadvantaged in terms of being able to access markets, supply chains and skills within the capital.

The Solent has a strategic port function of national importance and potential for airport expansion.

The Solent area has a large amount of port traffic relative to its size and forecast growth is likely to contribute to further congestion due to under-provision of roads and capacity at peak times. Solent has relatively few airport passengers for its size (per capita basis) due to its proximity to other airports within the London system and poor connectivity from the east

EUROPEAN CASE STUDIES

European case studies for regions of around 2 million people demonstrate what is possible with a long term strategic vision based around consistent transport investments for modal integration and city to city links

Figure 3.1



RANDSTADRAIL

In a city-region of 2.3 million residents RandstadRail strategically connects The Hague with Rotterdam in about 30 minutes with up to 12 trains per hour. There are effective interconnections with metro, bus and tram in both Rotterdam and the Hague. With Phase 1 opening in 2007 and Phase 2 in 2008, additional bridge and tunnel sections were required as well as a change in the rail franchise. Since 1850 the development of the Randstad railway and station locations initially followed urbanisation patterns but then became a planning tool for locating and concentrating new development.

For the Solent area, which has similar topographic issues, the scheme shows the potential to link different modes, use existing track networks and localise the rail franchise operator in the long term.

Figure 3.2



ORESUND

Connecting Copenhagen (population 1.3 million) with Malmö (population 700,000) the Oresund is the largest road and rail bridge in Europe that opened in 2000 at a cost of €3.5 bn. Journey time from city centre to city centre is just 35 minutes with up to six trains per hour. Tolerated for road traffic will pay for the capital costs by 2037. The trains act as a commuter service on the Danish side with stops every 4km and as a regional service in Sweden serving 33 cities including Goteborg. It is estimated that the bridge brings €740 million of labour market integration benefits each year and has helped to “internationalise” Malmö. Commuting levels have increased by a factor of seven since opening to reach 18,000. The easy access to Kastrup airport has supported new start-up firms in Malmö.

For the Solent area the Oresund shows the benefits of a dedicated multi-modal link between major cities and the ability to use the service for different functions (commuting, regional).

SUMMARY

While the growing Solent area is comparatively dense in terms of urbanisation and has an emerging polycentric distribution of housing and growth, it has an all modes transport infrastructure deficit, especially for public transport, lagging behind other UK comparator areas. The area also suffers from relatively slow access to London, which erodes its locational advantage.

Taken in the round, this suggests that there is significant room for enhancing the Solent’s transport network to support long term economic and productivity growth. For example, for inter-city labour market integration this could generate an increase by a factor of between 4 and 7 compared to UK and European examples.

TRANSPORT INVESTMENT PACKAGES

04

Local business and stakeholders implementing 25 year strategic transport investments will support the long term economic growth of the Solent area.

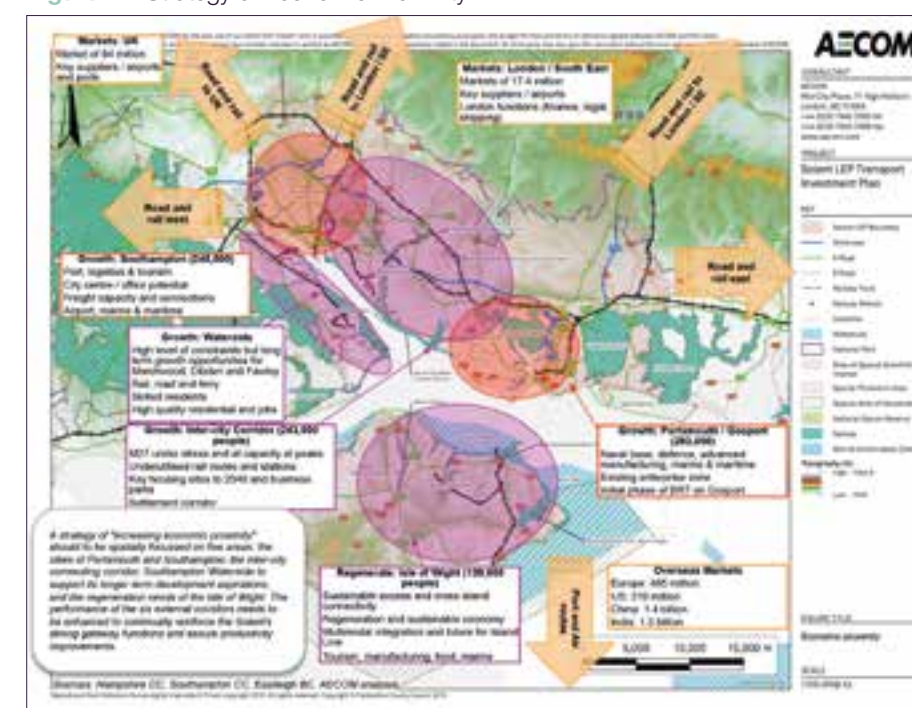
A FOCUS ON INCREASING ECONOMIC PROXIMITY

High value businesses derive benefits from being located in close proximity to each other, their suppliers and their workers. With 37% of all high skilled employment in Portsmouth and Southampton, the two cities are well placed to drive growth in the private knowledge-intensive industries that link to the local competitive advantages and their spatial clusters.

We have concluded that in the long term the Solent LEP’s business-led transport strategy should aim to “increase economic proximity” across five spatial areas and along six external strategic corridors. This strategy (see Figure 4.1) involves a number of elements:

- Increase dual city linkages around public transport and business critical movements to integrate labour and consumer markets.
- Support clustering and agglomeration around key local strengths and competitive advantages that other areas cannot replicate (e.g. port functions).
- Develop a corridor of development nodes based around an improved public transport offering between the cities and across the urban network to 2040 including easy access to stations by walking and cycling (active modes).

Figure 4.1 Strategy of Economic Proximity



Source: AECOM.

- Optimise and integrate the transport network (ticketing, information and operation) using next generation solutions so travel demand load can be spread to improve resilience and peak capacity accommodated especially in more constrained cities with pinch points.
- Secure improved strategic connections to London, the south east (airport passenger market), the UK (especially for port freight) and internationally for airport leisure and business market and “European” inward investment.
- A greater focus on Transport Orientated Developments (TODs). Increase residential densities around new and underutilised transport nodes to accommodate additional housing development while protecting natural assets and addressing affordability with the same land take.

TRANSPORT INVESTMENT PACKAGES

The Solent Strategic Transport Investment Plan focuses on the more economically transformative and longer term investments⁸ necessary to support and unlock the Solent's growth potential over the next 30 to 40 years. Over this timescale an additional 300,000 to 400,000 residents could make the Solent an area of 2 million people – equivalent to dual cities such as Nottingham/Derby and Newcastle/Sunderland.

From a review of the existing evidence base (Appendix C) that has assessed and modelled local issues and proposed a range of potential schemes for the Solent area, we have brought together some of these proposals and other suggestions from the stakeholder consultation⁷ into initial packages of transformational and strategic investments that have the potential to transform the Solent economy. Together these investments can support the long term vision of increasing economic proximity.

The investments are split into an initial Phase 1 covering five years to 2020 (short term) and then 20 years over Phase 2 (medium term) to give a 25 year plan to 2040 to align with normal planning timescales.

Our approach has been to pragmatically build upon known investments and directions of travel while seeking to maximise the performance of existing infrastructure. The investments have been split as follows and offer the opportunity to be supported by an evolution of the local governance and delivery function drawing from the emerging local devolution agenda:

- A Solent Transit package which is the main recommendation and a proposed step change in the development of a more extensive and integrated public transport system (including active modes) across the area to preserve the attractiveness of the area for skilled workers and growing firms.
- A roads package to ensure the best performance of the M27, A34 and other strategic roads acknowledging that additional road capacity is rapidly taken up. The focus is on securing the committed or funded schemes while proposing additional schemes for future Highways England investment phases.
- A strategic rail package to improve connections for passengers and freight to London, the south east and nationally working with Network Rail, Train Operating Companies and other partners. Refranchising gives the opportunity to improve local service provision.
- A range of investments to support the airport's growth potential including adjacent development sites.
- A package to improve access to the nationally strategic port services for both freight and passengers.

- In relation to governance and in the context of devolution, a new single policy and delivery body should be created to determine, manage and deliver transport plans and the delivery of public transport networks for the area. This should be based on any devolution agreement agreed for the area.

Where applicable, schemes identified, developed or promoted by the stakeholders and transport authorities and providers have been reviewed and included as part of the modal packages. In some cases strategic opportunities have been identified to be developed further by stakeholders in conjunction with the LEP, where they could have a potential transformative effect in connecting new and existing communities to jobs and opportunities within the key corridors identified for growth. In particular the potential to create a local rail based Solent Transit network.

⁷ See Appendix D for list of consultees.

⁸ The investments draw on the LEPs existing evidence base including earlier work considering the potential for transformational transport investments in the Solent LEP Area (Atkins 2014). This is supplemented by additional consultation and research completed by AECOM.

ALIGNMENT

As an economically-led strategic transport investment plan, the six elements of the economic proximity strategy are aligned with the packages of transport investments to be implemented in the short and longer term. These projects combined would assist the continued growth of Solent economy over the next 30 years.

We have looked at the strategic alignment of these packages against the six key indicators identified above. Whilst all have addressed at least two of the economic proximity indicators, investment in a transit network for the Solent area, composed of different public transport modes, is likely to have the greatest impact on supporting the economy (Table 4.1).

300,000 TO 400,000 RESIDENTS COULD MAKE THE SOLENT AN AREA OF 2 MILLION PEOPLE

These packages are detailed in Appendix A which identifies schemes which are completed, committed/funded and those which are suggested proposals for future investment rounds.

Figure 4.1 Strategic alignment of investment packages

	PROMOTING DUAL CITY LINKAGES	FACILITATING CLUSTERING OF EMPLOYMENT	PROMOTING SUSTAINABLE DEVELOPMENT NODES	INTEGRATING THE TRANSPORT NETWORK	IMPROVING STRATEGIC CONNECTIONS	PROVIDING TRANSIT ORIENTATED DEVELOPMENT (TOD)
Strategic Highway Package (Inc. Ports surface access, local and strategic roads)		✓✓			✓✓	
Strategic Railway Package	✓	✓	✓✓	✓✓	✓✓✓	✓✓
Solent Transit (Inc. Rail and Bus Rapid Transit and Fast Ferry Service)	✓✓	✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓
Airport Surface Access (Inter-city rail and airport access)	✓	✓✓		✓✓	✓✓	

Source: AECOM/Solent LEP

STRATEGIC HIGHWAY SCHEMES

The Gateway economy of the Solent is highly dependent on its road connectivity. The two ports and airport in particular can be affected by unreliability and delays in the network. Furthermore the attractiveness of the area for business, manufacturing and service related industries will be adversely impacted by accessibility concerns. Discussions with businesses have highlighted traffic delays on the strategic highway network as a key in their locational decision-making.

The strategic highway network, comprising sections of the M3, M27 and the urban motorways of the M271 and M275 are the arteries of the LEP area.

Competing demands on the capacity from local, long distance and gateway related users make sections of the network highly congested. Growth of jobs and housing in the future has the potential to further increase congestion. Lack of competitive journey times by public transport are a key factor meaning that even short hop journeys are made on the strategic roads.

STRATEGIC JUNCTION AND HIGHWAY IMPROVEMENTS

The following junctions and stretches of the motorway network are identified in both previous reports by stakeholders and in the Highways England investment priorities 2019/2020:

- M3 Junction 9: M3 Junction 9 is a vital junction in the regional transport network. Although the junction is not within the Solent boundary, it is of critical importance to the Solent economy because it provides the connection to the A34 linking the Solent with markets in the Midlands and North.



Image: Portsmouth Park & Ride
Credit: Portsmouth City Council

- M3 at Winchester (Junctions 9-12): The M3 to the east of Winchester is influenced by the operation of Junction 9. Reconfiguration of these junctions could help prevent queuing traffic impacting the motorway and in combination with the Junction 9 works above alleviate this pinch point in the network.
- M3 at Eastleigh (Junctions 12-14): The M3 around Eastleigh is influenced by multiple users making journeys between the Ports of Southampton and Portsmouth and the north, by traffic accessing Southampton on the A33, and shorter distance journeys between Eastleigh and Southampton. The junctions are short distances apart and this contributes to congestion from conflicting merging and diverging traffic.
- The access to the Port of Southampton is vital and although some reallocation of journeys to port and development related activity along the A33 may be possible, overall the solution to this section may lie in the need to move more local movements to public transport thus freeing capacity for longer distance freight and port related traffic.
- M27 West (Junctions 2-4): The M27 and its connection with the M3 suffer the same issues as the M3 Junction 13/14. Although major works have been completed to improve capacity on the M27 between Junctions 4 and 3, development of the Managed Motorway / Smart Motorway concept for this section of the motorway would help to optimise future traffic flows and help to alleviate the effects of congestion.
- M27 East (Junctions 4-12) and A27 to A3(M) Interchange: This whole section of the motorway network is a critical component of the Solent strategic network. In addition to strategic movements, the motorway carries large volumes of more local movements between the urban areas. As a result, the motorway is congested and frequently experiences stop start flows at peak times.
- At present, delays are localised at M27 Junctions 4, 5, 7, 8, 9 and 10-11 and at the A27 / A2030 junction east of Portsmouth. However evidence reviewed from Transport for South Hampshire⁴ and outputs from the Sub-Regional Transport Model predicts that future congestion is expected to spread to the whole route.



Image: M27

- Development of the Managed Motorway or Smart Motorway concept would help to manage the impacts of interactions of traffic flows and better meet the needs of strategic traffic using the route. However an integrated approach for a future strategy for the M27 corridor should focus on the importance of the more strategic movements connecting Portsmouth to Southampton and the M3 whilst working in tandem with InterCity and local rail improvements that will help to offer choice and shift short-hop journeys to more sustainable modes.

STRATEGIC ACCESS TO PORTSMOUTH

In Portsmouth, the principal strategic link on Portsea island is via the M275. It is this corridor that will also accommodate the bulk of new development and deliver traffic to an enhanced road network associated with new city centre development. Road network changes in the city centre in connection with the City Centre Supplementary Planning Document will alleviate traffic conditions at the southern end of the M275 as well as assisting public transport operations. Likewise the strategic Park & Ride on

the M275 at Tipner will also assist in accommodating growth and delivering mode shift for trips to the city centre, whilst a new link road has provided a new access to the Naval Base is assisting in the mitigation of the effects of this traffic.

STRATEGIC ACCESS TO SOUTHAMPTON

The A33 forms the main strategic access route into the city of Southampton and caters for a mix of traffic generated by both the city centre and the port. Development proposals for the City will see the city centre expand westwards between the Port and Southampton Central station which in turn will increase traffic demand on the A33 corridor. Likewise new development around Town Quay and the relocation of the existing ferry terminal for access to the Isle of Wight also has access from the A33.

The A33 is also the primary route for port traffic, with access to different parts of the docks and to the cruise liner terminals along the route into the City. Improved public transport connections to the city centre and riverside and the rest of the city would go a long way to helping to alleviate access problems as

well as looking at re-routing and access arrangements for cruise liner traffic. Clearly development proposals connected with the relocation of the ferry terminal and associated development will offer challenges to access by all modes and these will need to be addressed. It will be imperative that reliable road access to the port of Southampton is a primary consideration, given its economic impact and value chain.

Following Government advice⁹ on the importance of port access, these road investments should aim to reduce delays and improve journey reliability for goods traffic to and from the Port of Southampton. This will include improvements to M27 Junction 3 and potential operation of Managed Motorway along the M271 between this junction and the end of the motorway (Figure 4.2).

⁹ Access to ports', House of Commons Transport Committee: Eighth report of Session 2013-14, HC 266 published 26 November 2013, available at <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmtran/266/266.pdf>



Image: DP World Freight

STRATEGIC RAILWAY SCHEMES

Rail connectivity and in particular rail journey times between the cities and longer distance travel has already been highlighted by the LEP as a high priority for the local economy. The presence of the Port of Southampton as a key national point of entry into the UK for container traffic is also very important.

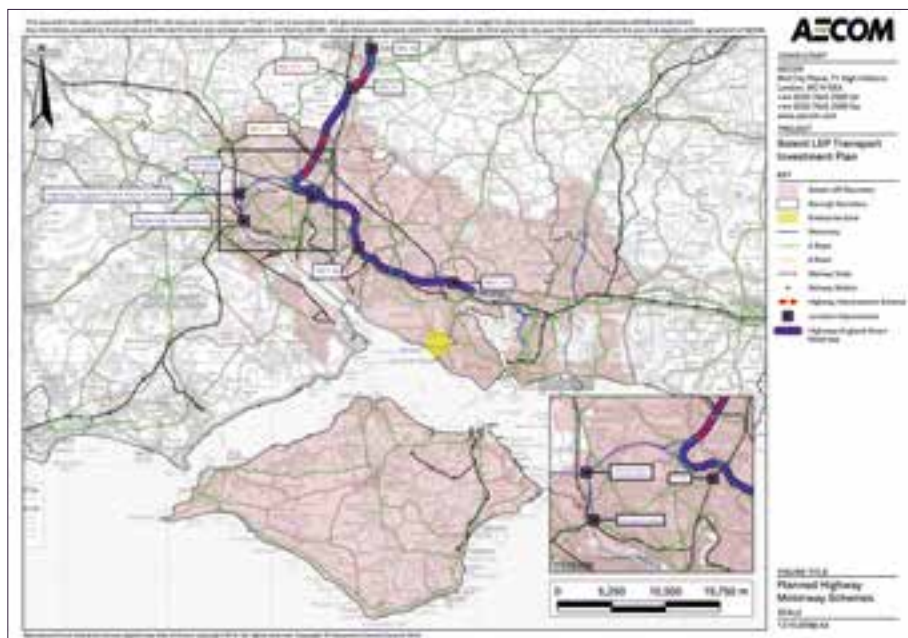
Freight traffic is relatively well served by the rail network. Approximately 35% of the containers handled in the Port of Southampton are moved inland by rail, to and from the Midlands and North. This very high rail mode share has developed because of direct rail freight connections at the Port itself and good connections to the industrial heartlands in the Midlands and North West.

The work undertaken for this study regarding the concerns of business and elected Members of Parliament indicates the perception that existing journey times from the Solent to London impact on travel behaviour, levels of business interaction and productivity and competitiveness of the two cities.

The Crossrail 2 project although a longer term and as yet uncommitted scheme could have far reaching consequences on the ability to speed up rail services from the Solent to the Capital. The latest proposal is for a regional railway, crossing central London, connecting outer south west London with rail lines to the north. Suburban trains which currently use the South West Main Lines into Waterloo would be diverted onto a new route, passing into a new tunnel south of Wimbledon, under Clapham Junction, and then serving Victoria, the West End and the international high speed rail hub at Euston / St Pancras / Kings Cross.

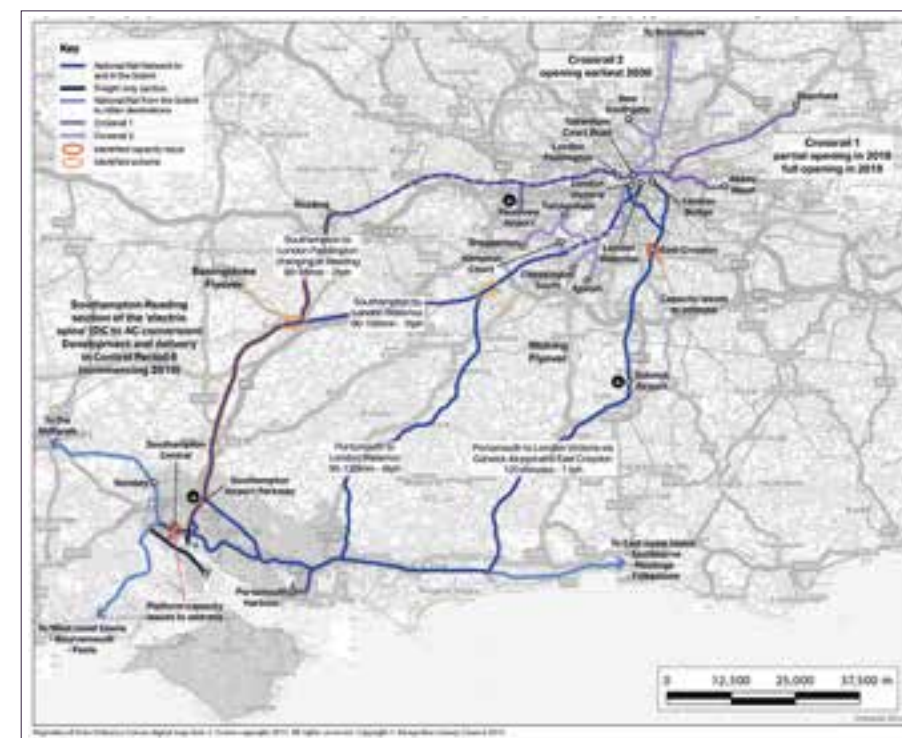
Moving existing stopping services onto this new line will release capacity on the existing tracks and therefore the Crossrail

Figure 4.2 – Strategic Highway Schemes



Source: AECOM.

Figure 4.3 Strategic Railway Schemes



Source: AECOM.

2 proposal could free-up track space for fast trains, from places along the whole corridor, including Southampton.

The case will need to be made in tandem with the development of Crossrail 2, for the reallocation of existing tracks to fast services from London, to enable a fast inter-city railway to Southampton equivalent to other major routes connecting other major cities with London.

In combination with reconfiguration of platform space at Waterloo and potential remodelling of tracks between Waterloo and Clapham Junction, it should be possible to deliver up to 24 fast trains per hour from Waterloo, which offers the opportunity to radically improve long-distance service patterns.

It is also important to note that the role of Clapham Junction with Crossrail 2 will be enhanced. Clapham will act as a key hub providing opportunities for Solent services to connect to wider London destinations.

Another key priority highlighted in Network Rail's Wessex Route Study is a major improvement will be to address conflicts at Woking, which significantly affect track capacity and line speeds in this area. This scheme is currently being developed by Network Rail.

Overall the combination of these schemes in the longer term will greatly assist in achieving faster rail journeys from Solent to London. Research completed for the LEP suggests that following examination of current rail journey speeds and stopping patterns between Southampton Central and Waterloo, it is considered that a 60 minute journey time could be feasible, subject to tackling the constraints identified.

In contrast to the Southampton route, the route from Portsmouth to London via Petersfield has lower line speeds and a number of stations. There is more limited scope to rationalise stopping patterns and also unlikely that maximum running speeds could be significantly increased without major works to realign the tracks.

However the route will benefit from the same improvements at Woking and the potential effects track and signalling at Clapham Junction and Waterloo in association with Crossrail 2. A local service network would also allow the longer distance trains not to stop at Havant and Fratton. The exact potential of these measures on end to end journey times from Portsmouth to London will need to be investigated in further work.

In the longer term Investment in the 'electric spine' from the North and Midlands to Southampton will further enhance the competitiveness of rail freight between the Solent and the rest of the UK. At present, freight trains from the port of Southampton pass through Southampton Central and the Southampton Tunnel towards the north. It may be possible to divert a proportion of these trains via Salisbury or Chandlers Ford to free paths for fast trains in this area. This might prove critical to the development of a faster more frequent service to London and for the development of a local rail transit network discussed later (Figure 4.3).

There is scope following the speeding up of longer distance services to look at stopping patterns of strategic services particularly in Solent with the aim of developing local rail services by a local transit network. These are described further in this section.

INTER-CITY RAIL AND AIRPORT ACCESS

The distance between Southampton and Portsmouth is just 20 miles. The journey by road can take between 30 minutes and 45 minutes in the peak hours depending on the congestion. Actual journey times can vary considerably and are highly variable. This is a particular issue for journeys to Southampton airport. The M27 is not resilient as a single incident can have a catastrophic impact on movements across the Solent and the consequential impact on productivity.

Rail connectivity between the two cities is comparatively poor. The journey takes between 45 and 65 minutes via only two to three direct connections per hour, two services requiring a transfer in Fareham. Travel by train between the two cities is considerably slower than by road.

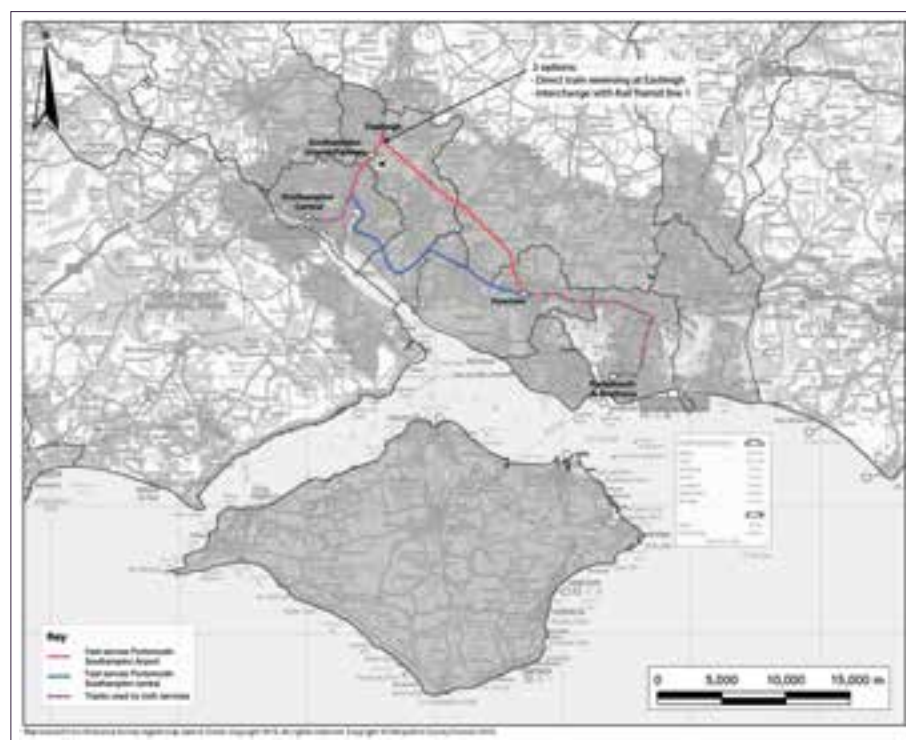
A journey from Portsmouth to Southampton Airport also requires a change at Southampton Central or Eastleigh.

Two routes are available between the cities: the Netley line and the Botley line. The Netley line is direct, but has a number of intermediate stations that are served by stopping services. These stopping services affect the maximum speed that can be achieved on the line. The Botley line connects Fareham to Eastleigh: it does not connect directly to Southampton without a change at Eastleigh.

The problems of poor rail connectivity between the cities are also reflected in poor connections from the east to Southampton Airport Parkway. This station is not only the access to the airport but also acts as a sub-regional transport hub, providing longer-distance rail connections to the Midlands and North. It serves a wide catchment westwards towards Romsey in particular. Park and ride with motorway access being preferable for many compared to congested access to city centre stations or slow services from local stations.

Whilst good connections are available on the main line, access from the east is very poor. Journey times from Portsmouth and Southsea to the Airport vary approximately between 46 and 85 minutes. The typical journey time by car from Portsmouth, in contrast, is around 25 minutes outside the peak periods. The mode share by rail for journeys to the airport from the east is therefore low and contributes to high levels of car use on the M27.

Figure 4.4 Proposed intercity Fast Train services.



Source: AECOM.

By contrast, as with the city to city connection, travel from Portsmouth to the airport is via the Netley line, which requires changing in Southampton or via the Botley line, with a change at Eastleigh, neither of which provides a competitive alternative to car travel despite increasing motorway congestion.

Any option for reducing the rail travel times between the city centres and to the Airport will rely on the ability to either increase speeds and or reduce the number of stops en route.

The introduction of a local rail service network would allow Solent limited stop services between the cities either via the Netley or Botley routes. The latter would also provide the ability to serve Southampton Airport en route via a reversal at Eastleigh or via the construction of a chord to allow trains to turn south from the Botley line towards Southampton. The aim would be to achieve as close as possible to a 30 minute journey time from Portsmouth

and Southsea station to the Airport, continuing on to Southampton Central within the 40 minute total journey time.

A limited stop service on the Netley Line already takes approximately 45 minutes and there may be some scope to reduce this to 40 minutes as well in combination with the introduction of local and limited stop services.

The Inter-city services and the link to the Airport from both cities could be composed of existing services or form part of the proposals for a Solent Transit network which is discussed in the following section (Figure 4.4).

SOLENT TRANSIT NETWORK

Solent Transit would bring together an integrated network of public transport modes. Together this will allow improved connectivity and accessibility across the Solent area to link communities and opportunities together and support sustainable economic growth. The component parts would complement existing or modified strategic rail services and passenger ferries to and from the Isle of Wight and Gosport.

Strategic Park and ride sites and local interchanges with the bus network would be essential elements of the network.

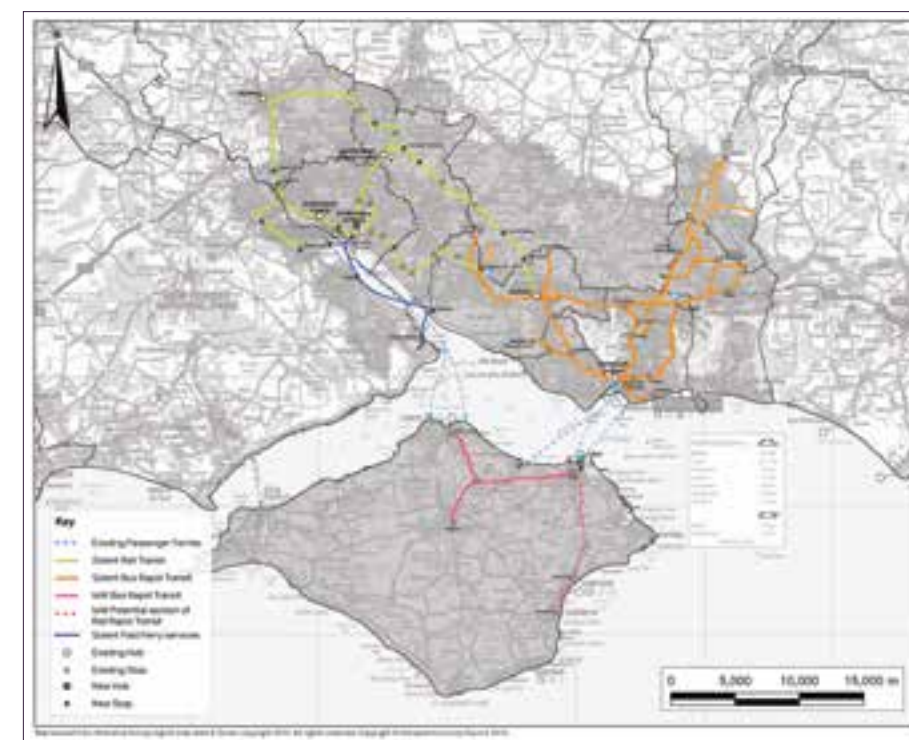
The proposed network would also include;

- A local Rail Transit network
- A Bus Rapid Transit network
- A Southampton Water Fast Ferry Service

In addition to the strategic railway schemes aimed at improving journey times to London and between the two cities, the proposed Solent transit network will provide a local frequent, multi-stop service in and around Southampton and Portsmouth, and allow an efficient connection between the city-centre, the ports, the ferry terminals and cruise terminals, the airport as well as well as other hubs of the Solent area such as Fareham or Romsey as shown on Figure 4.5 below. The network will permit local residents, workers and passengers to easily travel within the Solent area and make connections to further destinations.

There is an opportunity to create a cost effective local rail service network using existing rail lines radiating from Southampton and Portsmouth. Existing and potential new stops would address the distribution and movement patterns associated with current population and employment centres. It would also act as

Figure 4.5 Proposed Solent Transit Network.



Source: AECOM.

the spine on which to locate key growth in jobs and housing in the key corridors identified in the relevant local and strategic plans. The clustering of development will help to prevent urban sprawl and protect green spaces, integral assets to the attractiveness of the area to high skilled workers and investors.

Further work and definition and business cases for the rail transit network will clearly be required to progress these further, but the principle of an integrated rail network serving the local area is a key transformational investment to support long term growth in the Solent.

The Transit proposals also provide the opportunity to create a multimodal interchange between Ferries and Transit services in the vicinity of Royal Pier in Southampton comparable to the Hard in Portsmouth.

RAIL TRANSIT NETWORK

Whilst the choice of technology for such a rail system running on existing lines would be determined by further study and project definition, the application of tram train technology would allow extensions of the network to better serve Southampton Port, cruise and ferry terminals, thus addressing the poor integration and connectivity between modes. Likewise tram technology may offer a more cost effective way of achieving a chord at Eastleigh and allow for other street extensions in Portsmouth or other major development nodes offline to the railway (such as to Whiteley).

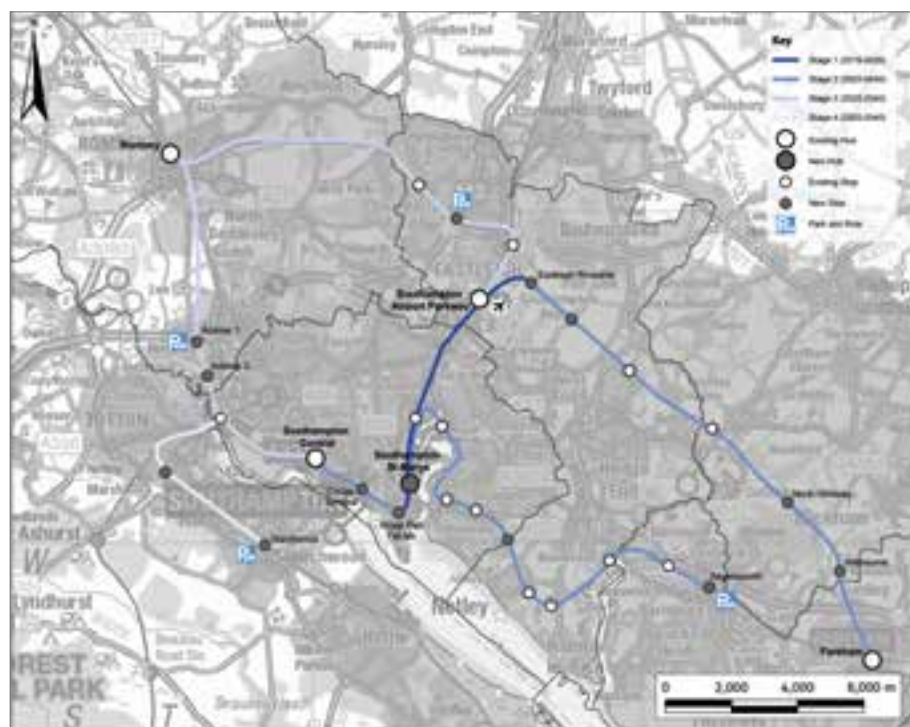
The rail transit network could be introduced flexibly over time and potentially used to support key growth points. In this context we suggest that the link from Southampton Port to Eastleigh via the Airport should be a first phase, followed by the Netley line as far as Segensworth.

Limited stop transit services could also provide the connection between the cities as in the case of the Randstad.

Potential phases of the rail transit network are shown in Figure 4.6 and detailed below:

- **Line 1:** running from Fareham to Southampton city-centre, this line will use the existing Botley line tracks to link Fareham and the BRT Network, and development areas. It will be developed in different stages, the first being between Eastleigh riverside and the Royal Pier via Southampton Airport and a new riverside station at St. Mary's. It will then be extended eastward to Southampton Central and westward to Fareham.
- **Line 2:** operating between the new Southampton St-Marys station and Segensworth, this second line will use the existing westbound Netley line to serve locally several stops including existing ones and potential new stops, creating an efficient local service to Southampton riverside and city-centre, in connection to the first line.
- **Line 3:** the third line of the network will extend Line 1 westbound to Romsey, serving Adanac business park and a new Park and Ride.
- **Line 4:** going from Romsey to Southampton Airport Parkway station, this fourth line completes the loop of Solent Rail Transit and allows current poorly served areas to access the network and easily access the port, the airport and the city-centre.
- **Line 5:** as a final link, a connection between Redbridge and Marchwood via Totton will be considered, mainly depending on the development of the area, and improving access from/to the Southampton Waterside area.

Figure 4.6 Proposed Solent Light Rail Network



Source: AECOM.

- **Line 6:** Portsmouth Transit. It would also be possible to consider the Link between Havant and Portsmouth City Centre as an addition to the network. Incorporating a Park and Ride at Farlington and a possible on street extension from Portsmouth and Southsea station via a revised City Centre road layout to Cascades, Church St Rudmore and the Continental Ferryport. Additional stops could also be provided between Fratton and Hilsea (Figure 4.6).

On the Isle of Wight the future of the Island Line has been the subject of considerable debate recently. The line provides important services for passengers, but currently runs at a significant financial loss and requires significant investment for upgrades to maintain the integrity of the infrastructure and rolling stock¹⁰.

¹⁰ South Western Rail Franchise Stakeholder Consultation, Rail Executive, November 2015.

¹¹ The future of Island Line - Options Report - Christopher Garnett for Isle of Wight Council - 20 January 2016.

The Island Line forms part of the South Western Franchise, but operates under a separate Lease Agreement with Network Rail rather than an Access Agreement. Responsibility for infrastructure maintenance and renewals is shared between the operator and Network Rail under this lease, which is due to expire in 2019. In approaching the re-letting of the South Western franchise, a key objective of the Rail Executive is to secure an appropriate, financially sustainable long term future for the Island Line⁶.

Government has stated their expectation that the next franchise should develop ideas to turn the Island Line into a separate self-sustaining business during the life of the franchise⁶. The recent report on possible tram or light rail conversion of the line offers one potential solution and would fit with the wider Solent Transit concept¹¹.

¹² South East Hampshire Transport Network Improvements Package - Summary Report (Working Draft) Hampshire County Council and Portsmouth City Council 11th October 2013

BUS RAPID TRANSIT NETWORK

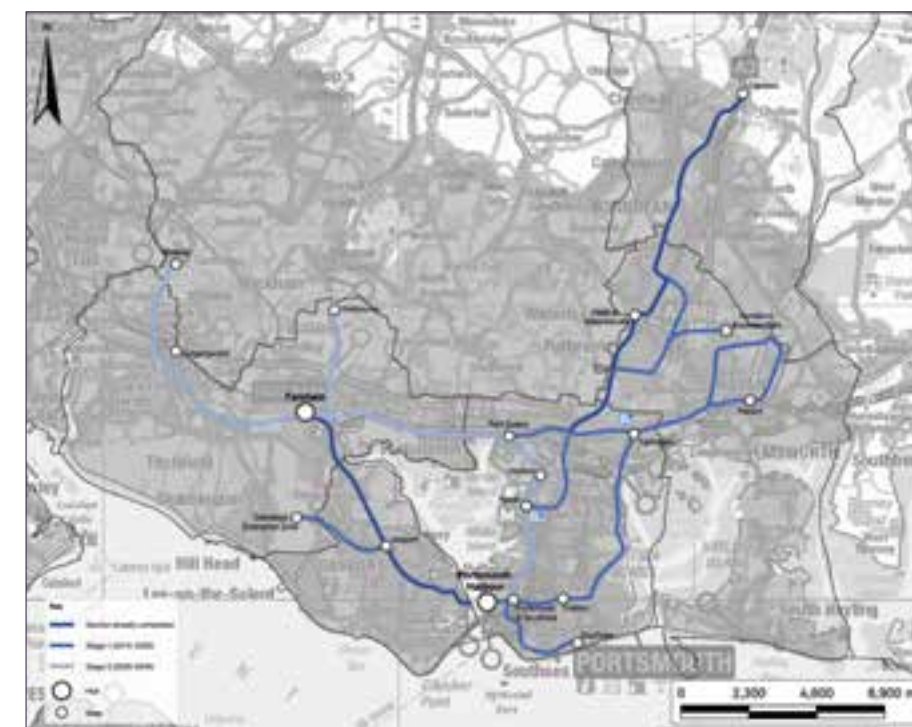
Extensive work has already been undertaken to identify and develop a bus rapid transit network¹² radiating from Portsmouth. Bus Rapid Transit (BRT) initially proposed by Transport for South Hampshire² would connect to the proposed Rail Transit Network and aims to serve the development areas as Dunsbury Hill Farm Business Park, Daedalus Enterprise Zone, Welborne and North Whiteley, to key existing destinations, linking jobs, homes, education and leisure.

This network, which builds on the successful Eclipse scheme from Fareham to Gosport and the A3 Zip corridor, would create a comprehensive network serving key development sites and linking them to the city.

Portsmouth BRT network would connect to the existing A3 Zip Corridor (opened in 2008 from Clanfield to Portsmouth). In the short-term all services serving Portsmouth city-centre from the East including additional services to Waterlooville and Havant are to be prioritised. Western routes will come on line in later phases, and will depend on the implementation of the Tipner-Horsea bridge link. This includes services to Fareham, Welborne and Whiteley. The full proposed BRT network is illustrated above on Figure 4.7.

On the Isle of Wight, in addition to a sustainable future for the Island Line, the impacts of localised congestion and barriers to movement on the Island bring with them the opportunity to develop priority measures and sections of busway which would offer a “BRT Lite” links between Ryde, Newport and Cowes which would be part of the integrated transit network via ferry connections to the rest of the Solent area and beyond. This would need to interchange with the ferry terminals within an integrated transport network.

Figure 4.7 Proposed Solent Bus Rapid Transit Network



Source: AECOM.

Figure 4.8 Proposed Southampton Water Fast Ferry Service



Source: AECOM.

A SOUTHAMPTON WATER FAST FERRY SERVICE

The development of housing and or employment along the Waterside is likely to bring with it the potential for increased traffic through sensitive environmental areas. The levels of development and the distances involved are unlikely in the short term to make a rail extension viable. However there is interest in the

development of a fast ferry service on Southampton Water calling at key locations such as the former Fawley Power Station, Warsash, Hythe and Marchwood connecting to the interchange at Southampton with wider Transit links to the Solent Area.

SUMMARY

The evidence suggests that the prospects for the Solent economy are good, but may be constrained in the future by the impact of strategic and local transport congestion and connectivity. The Solent's role as a key gateway for people and freight makes a strong national and local case to improve both strategic and local connections. Furthermore the topographic and environmental constraints point towards a concentration of growth in certain key corridors. Restricted alternatives to car travel in those corridors tends to exacerbate the effects of traffic and hence attractiveness of these locations for business or homes.

Whilst improvements to the strategic road network will go some way to alleviating some of the current constraints and barriers to growth, the stakeholders and business community consulted as part of this study concur that the long term vision for the area has to be based on an integrated public transport offer that supports the two cities and creates a Solent wide network that links existing communities and growth opportunities in the key corridors.

With the arrival of Crossrail 2 in the longer term, opportunities exist to speed up services from Southampton to London and in so doing to re-examine the stopping patterns of trains and allow the development of a local Solent Rail Network.

In looking at the role of long distance and local rail services it would be possible to improve the journey times and connectivity between the two cities and between Solent and the Capital and to create a resilient local service network that could be expanded over time to incorporate all the key growth and development sites.

A review of stopping patterns of Rail services combined with introduction of a new local rail network brings with it the opportunity to look at faster limited stop services between the two cities via either the Netley or Botley lines and the introduction of a competitive rail link between Portsmouth and Southampton Airport.

The introduction of a local rail network using existing rail routes would allow competitive journey opportunities, with resilience from disturbances in the strategic network. Furthermore, by considering alternative rail technologies such as tram trains, extension to the existing network could be considered, such as the link to Southampton Port and Waterfront areas to tackle some connectivity and integration issues. Other connections off the heavy rail network could include a reinterpretation of the Eastleigh chord and possible connections in Portsmouth city centre.

A real opportunity exists to bring together transformative schemes such as the BRT network serving Portsmouth and its hinterland with the radical rethink of how rail services and the existing rail infrastructure is used and existing and new Fast ferry services to form a Solent Transit Network which would integrate movement between the cities and the key growth corridors. The adoption of a Solent Transit network would act not only as a catalyst, but as an external brand asset for the Region in much the same way as metro or LRT schemes have done for other cities.

A flexible pragmatic approach to developing the wider Solent Transit Network with both Rail and BRT and fast ferry services could be phased over time, starting with the link between Southampton Waterfront and Eastleigh. In the longer term other routes stations and additions to the network could be added. By this means that investment can be matched to growth, and longer term transit orientated development focussed on the Transit network can be considered.

CONCLUSIONS AND NEXT STEPS

CONCLUSIONS

Based on an analysis of past and recent trends allied with the future potential and economic forecasts, it is clear that the Solent area could become a region of 2 million people over the next 30 to 40 years. While improvements will result from the current investment programmes of Highways England, Network Rail, Public Transport Operators, and the Local Transport Authorities, forecasts suggest increasing congestion will occur on the road network and this will continue to affect business productivity locally and constrain growth potential. Furthermore many future development locations are dependent on the road network.

Compared to other similar areas and despite growing faster the Solent area has an all mode infrastructure deficit. This needs to be addressed to ensure that future growth is accommodated in a sustainable way and to ensure that the agglomeration and productivity benefits from market integration and expansion are secured.

KEY RECOMMENDATION AND NEXT STEPS

The key recommendation of this 25 year investment plan is that the Solent area now needs to take the bold decision to focus on the development of an integrated and expanded public transport network - Solent Transit – covering new and existing bus, rapid bus, ferries, park and ride and rail/light rail modes across the increasingly integrated area.

Solent Transit offers a key structure for accommodating the economic and population growth effectively while protecting the high quality environment by giving an explicit focus on Transit Orientated Development and securing access to our key gateway assets.

The next steps to take Solent Transit forward would involve:

- Securing buy-in from local public and private sector stakeholders and agreeing the implementing body and governance structures (In relation to governance and in the context of devolution, a new single policy and delivery body should be created to determine, manage and deliver transport plans and the delivery of public transport networks for the area. This should be based on any devolution agreement agreed for the area.) Private sector partners would have the potential to bring forward schemes that are supportive of the transport vision.
- Integrating the strategic transport needs from business into other local workstreams for transport, land use and infrastructure acknowledging local constraints (e.g. Solent Strategic Economic Plan, any emerging devolution deal for the area, the emerging Partnership for Urban South Hampshire Spatial Strategy work, and under development by Solent Transport including the updated Sub regional transport model, and Rapid Transit).
- Producing a business case for the Solent Transit programme and its initial phases. This will require feasibility assessments and sifting of viable options to meet transport appraisal guidance. However there is potential to complete the following by late 2016:

- A strategic and economic case for the Solent Transit phased programme in line with revised Government guidance on wider economic benefits.
- Detailed transport business cases for the initial phases of (a) the Phase 1 of the rail transit solution in Southampton and (b) an extension of the BRT in Portsmouth.
- Strategic highways will need continued investment to tackle known problems and support essential business use and optimise its strategic route function while public transport options are developed.

Strategically a public Solent Transit network should be developed over the next 25 years based around rail for Southampton, rapid bus in Portsmouth and potential extended rapid bus on the Isle of Wight, with integration and interchange as a key objective.

Faster rail services are required between the Cities to integrate labour and housing markets, leverage the airport's function and offer viable alternatives to road. This can be integrated with current and proposed park and ride

In parallel, the segregated Bus Rapid Transit around Portsmouth should be extended and linked to Park & Ride locations to provide alternatives to road.

APPENDICES

APPENDIX A
TRANSPORT INVESTMENT PACKAGES

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APPENDIX B
BENCHMARKING RESULTS TABLES

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LIST OF CONSULTEES

Image: M275 - Portsmouth
Credit: Portsmouth City Council

APPENDIX A

TRANSPORT INVESTMENT PACKAGES

INVESTMENT PACKAGES	PHASE 1 (2015-2020) KEY: Committed or Funded / Completed / Proposed	PHASE 2 (2020 - 2040) KEY: Committed or Funded / Completed / Proposed
<p>Roads Package Local and strategic, including freight Highways England (HE) / HCC / SCC/ PCC/ IoWC</p>	<p>Highways England Investment Priorities; to start by 2019/20:</p> <p>M27 SMART Motorway (£260m) and widening (£1.6bn)</p> <p>M3 SMART Motorway</p> <p>M271/A35 Redbridge Roundabout improvement (£5.5-£10m)</p> <p>M3 Junction 9/A34</p> <p>M27 Junctions, including Junction 3</p> <p>Junction 5 / improved access to airport development sites</p> <p>Junction 10 (north of Fareham)</p> <p>Southampton Junctions (M27/J8, A27 Windhover roundabout, A3024, A27/A335)</p> <p>M3 J9-14, M3 J10-11, M3 J12-14 highway capacity improvements (£50-200m)</p> <p>M27 J9 improvement to support planned developments</p> <p>A3 improvements (£200m-£300m)</p> <p>Local network improvements:</p> <p>Gosport, Stubbington Bypass, Botley Bypass</p> <p>Improve access around airport to unlock development (including Wide Lane Bridge)</p> <p>Potential for devolution of powers for the integrated management of the M27/M271/M275</p> <p>Coppins Bridge strengthening works, Newport</p> <p>Further improvements to Coppins Bridge, Newport</p> <p>Portsmouth City Centre Roads Infrastructure Reorganisation</p> <p>Whiteley Way</p> <p>Improved highway access to Marchwood Military Port</p> <p>Millbrook roundabout</p>	<p>Extension of Active Motorway to A3(M) interchange</p> <p>Park and Ride hubs</p> <p>Local network enhancements</p> <p>Improved Isle of Wight and mainland link focussed on ferry travel</p>
<p>Strategic Rail Package Strategic connections to enable connections beyond the Solent (e.g. north, London and SE), incl. rail freight Network Rail / TOCs linked to re-franchising</p>	<p>Address platform capacity issues at Southampton Central</p> <p>Interim Improvements services to enable faster trains between Southampton, Portsmouth and London</p> <p>Conduct a Solent LEP local and strategic rail route study</p> <p>Improve walk and cycle in catchments to stations and provide adequate cycle carrying capacity on trains.</p> <p>LEP and partners to feed business requirements into Wessex re-franchising.</p> <p>Commitment to Woking and Basingstoke Flyovers</p> <p>Commitment to Electric Spine from the North and Midlands to Southampton</p>	<p>Crossrail 2 (£27bn), incl. improvements in SE and London</p> <p>Optimise capacity on South West Main Line in London</p> <p>Remodel tracks between Waterloo and Clapham Junction</p> <p>Optimise interchange at Clapham Junction between the mainline and Crossrail 2</p> <p>Based on Crossrail 2 measures and Woking / Basingstoke Flyovers (design option currently), improvements services to enable fast trains between Southampton, Portsmouth and London</p> <p>Basingstoke to Southampton Electric Spine electrification (CP6 2019 onwards)</p>

INVESTMENT PACKAGES	PHASE 1 (2015-2020) KEY: Committed or Funded / Completed / Proposed	PHASE 2 (2020 - 2040) KEY: Committed or Funded / Completed / Proposed
<p>Solent Transit Package Local bus, rail and ferry Park and Ride Demand Management TOD nodes for Housing Growth Zones Local Transport Authorities/Solent LEP/ Private "Solent Metro"</p>	<p>Fast Ferry services to Southampton Water sites subject to development (first phases, including Warsash and Hythe)</p> <p>Provision of interim improved journey times and services between Portsmouth, Southampton Airport and Southampton city via Botley line reversal at Eastleigh</p> <p>Rail transit network Phase 1: Eastleigh-Southampton Airport-Royal Pier. (scheme development and design)</p> <p>Southampton Royal Pier Multimodal interchange(scheme development and design)</p> <p>Improvements to Public transport access to Southampton Waterside developments, ferries, port and cruise terminals</p> <p>Portsmouth BRT network, all services serving Portsmouth city-centre from the East including additional services to Havant.</p> <p>Design and Implementation of IoW Island Line as LRT</p> <p>Development of a BRT "Lite" network on Isle of Wight between Ryde to Newport and Cowes integrated with traffic congestion measures.</p> <p>Further development of Integrated ticketing and information systems Solent-wide</p> <p>Improve walk and cycle in catchments to stations and nodes.</p> <p>Station Quarter, Southampton</p> <p>The Hard Interchange, Portsmouth.</p>	<p>Rail transit network Phase 1: Eastleigh-Southampton Airport-Royal Pier. (Implementation).</p> <p>Southampton Royal Pier Multimodal interchange (Implementation)</p> <p>BRT Western routes, including services to Fareham, Welborne and Whiteley, to be implemented in the longer-term; dependent on the Tipner-Horsea bridge link.</p> <p>Additional fast ferry stops will be considered, dependent on future development potential, including Marchwood and Fawley-Calshot areas.</p> <p>Provision of interim improved journey times and services between Portsmouth and Southampton in conjunction with Transit network either via Botley line or Netley Line</p> <p>Southampton Airport – Portsmouth faster rail service in conjunction with Transit services on the Botley Line</p> <p>Rail transit network later Stages 2-4 (scheme development , design and implementation. see annex following pages for description)</p> <p>Additional Solent-wide Park and Ride hubs connecting development sites to rail/bus network</p>
<p>Airport Package AGS Airports Ltd / Highways England Network Rail Rail Operators</p>	<p>Improved road access and junction improvements at M27 J5 and improved access to surrounding development sites. (see Roads Package).</p> <p>Rail links (see strategic Rail and Transit Packages)</p> <p>Investigate Improved services to Heathrow / Gatwick airports</p>	<p>Improve services to Solent Airport via Eastleigh and the Botley Line or equivalent solution to meet business needs</p> <p>Improved rail connection eastwards to Portsmouth (see Rail and Solent Transit packages)</p> <p>Southampton Airport runway expansion</p> <p>Consideration of any new runways in the SE</p>
<p>Port Package Port freight, cruise, ferry ABP, Wightlink, Red Funnel Solent LEP Local Transport Authorities</p>	<p>Commitment to Electric Spine Rail improvements.</p> <p>Royal Pier Waterfront development and Ferry Terminal Investments in Southampton and East Cowes</p> <p>Integrated logistics plan for the Solent</p> <p>Strengthening highway access to the Ports.</p>	<p>Electric Spine development (see Rail Package).</p> <p>Port expansion</p> <p>Intermodal hubs</p>
<p>Governance / Delivery Devolved functions</p>	<p>In relation to governance and in the context of devolution, a new single policy and delivery body should be created to determine, manage and deliver transport plans and the delivery of public transport networks for the area. This should be based on any devolution agreement agreed for the area.</p> <p>To be updated to align with any devolution discussions</p>	<p>To be updated to align with any devolution discussions</p>

APPENDIX B

BENCHMARKING RESULTS TABLES

TABLE B1 - POPULATION GROWTH AND ECONOMIC DYNAMISM

Source: Annual Population Survey (LA basis), BRES, DCLG

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM	EDINBURGH & GLASGOW	SWANSEA & CARDIFF
Population in 2014 (Millions)	1.3	4.3	2.0	3.0	2.1	2.3	0.9
Population growth 2009-2014 (CAGR)	0.7%	0.6%	0.4%	0.6%	0.6%	0.6%	0.6%
Housing completions per 1,000 residents (2014)	3.2	1.5	2.5	3.0	1.7	-	-
Employment in 2014 (Thousands)	693	1,831	787	2,071	913	1,168	436
Employment growth 2009-2014 (CAGR)	0.6%	0.4%	0.3%	0.2%	0.2%	0.0%	0.3%

TABLE B2 - EMPLOYMENT AND JOBS

Source: 2011 Census Origin/Destination Data, Annual Population Survey, BRES

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM	EDINBURGH & GLASGOW	SWANSEA & CARDIFF
% of residents working in a different district to their place of residence	40%	40%	37%	31%	47%	29%	11%
% of population in two main cities	29%	23%	29%	44%	26%	48%	63%
% of recent population growth found in two main cities (2009-14)	45%	45%	47%	52%	43%	77%	75%
% of employment in two main cities (2014)	38%	39%	49%	41%	46%	81%	95%
% of recent jobs growth found in two main cities (2009-2014)	9%	31%	22%	17%	60%	-22%	48%

TABLE B3 - PLACE OF WORK

Source: 2011 Census Origin/Destination Data. NB. The city area boundary affects the degree of self-containment

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM	EDINBURGH & GLASGOW	SWANSEA & CARDIFF
% OF EMPLOYED RESIDENTS WHO ...							
Live and work in the same "main city"	20%	16%	19%	23%	18%	44%	64%
Work in the other "main city"	1%	0%	1%	0%	1%	1%	1%
Live outside the two main cities and work within them	13%	15%	16%	10%	14%	18%	5%
Live in the two main cities and work outside them	10%	7%	8%	5%	6%	5%	4%
Live and work outside the two main cities	56%	63%	55%	62%	61%	32%	26%

TABLE B4 - COMMUTING

Source: 2011 Census Travel to Work Data; DfT Average Distance of Travel to Work (A further 2% use "other means" in all benchmarked city pairs)

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM
Average commute distance (Miles)	9.6	8.2	10.4	8.9	9.3
Total annual commuter movements (Million Miles)	5.8	13.0	7.6	16.3	7.6
% travelling to work by car	64%	63%	64%	65%	67%
% travelling to work by public transport	8%	15%	14%	12%	10%
% travelling to work by bicycle	4%	2%	2%	2%	2%
% walking to work	11%	10%	10%	10%	10%
% working from home	11%	8%	8%	9%	10%

TABLE B5 – TRANSPORT INFRASTRUCTURE

Source: DFT “Table RDL0102b-Major road dual carriageway road length by road type and local authority in Great Britain, 2014”, relevant websites. * Solent figure reflects the proportion of the motorway network in Portsmouth and Southampton and the part of Hampshire that is in the Solent LEP area.

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM
Annual bus journeys per resident	45	80	78	144	58
Miles of tram / metro network per million people	0	31	24	6	9
Miles of motorway per million people	26 *	31.6	15.4	45.8	0.1
Miles of A road per million people	14.3	49.4	112.9	65.0	16.1

TABLE B6 – ACCESS TO LONDON

(Weekday, 12.00 PM) Source: Google Maps, Network Rail

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM
Average minutes to London by rail	88	138	78	135	90
Average speed to London by rail (MPH)	53	87	24	82	79
Average minutes to London by road (m)	78	217	271	177	125
Average minutes to London by road	105	210	275	195	140
Average speed to London by road (MPH)	45	62	59	54	54

TABLE B7 - PORTS

(Combined port and airports systems within region) Source: DFT

	SOLENT AREA	MANCHESTER & LIVERPOOL	SUNDERLAND & NEWCASTLE	LEEDS & SHEFFIELD	DERBY & NOTTINGHAM		
Tonnes of port traffic	40,473	38,121	7,387	-	-	-	2,257
Tonnes of port traffic per thousand residents	26	9	4	-	-	-	2
Airport (million passengers per annum)	1.8	26.0	4.7	3.3	4.5	17.9	1.0
Annual airport passengers per thousand residents	1,203	6,282	2,431	1,124	2,165	8,061	1,121

APPENDIX C

LIST OF DOCUMENTS REVIEWED

Atkins Working Paper:

Technical report considering potential for transformational transport investments in the Solent LEP Area (2014)

Centre for Cities

Anchoring Growth (2013)

Centre for Cities

Outlook (2015)

Hampshire Chamber of Commerce

Transport Strategy Review Reports (2011, 2012)

Hampshire County Council

Jobs Report (July 2015)

Hampshire and Isle of Wight

Devolution Prospectus (Sept 2015)

Highways England Route Based

Strategies: Solent to Midland and M25 to Solent

HM Government

Fixing the Foundations (July 2015)

House of Commons

Transport Committee

Access to Ports (2013)

LEP Network

Creating Successful Local Economies (2012)

Network Rail Market Studies

ONS Household Surveys, Census and Annual Population Survey

Oxford Economics

Solent LEP Economic Forecasts (June 2015)

PBA

Solent Transport Investment Plan Consultation Report (2015)

SEEC

Mind the Gap (June 2014)

Solent LEP

Annual Report (Jan 2016)

Solent LEP

Productivity and Growth Supplement (2016)

Solent LEP

Strategic Economic Plan: Transforming Solent (Oct 2014)

Solent LEP

Transforming Solent: Marine and Maritime Supplement (2014)

Solent Transport (formerly TfSH)

Transport Delivery Plan (Feb 2013)

TfL

Drivers of Demand for Travel in London (2014)

UK Commission for Employment and Skills

The Future of Work: Jobs and Skills in 2030 (2014)

Visit England

Future Trends (2013)

Wessex Route Study

PUSH

South Hampshire Strategy

South Western Rail Franchise Stakeholder Consultation, Rail Executive, November 2015.

APPENDIX D

LIST OF CONSULTEES

Solent Strategic Transport Investment Plan
AECOM Stakeholder Consultation
(Sept 2015 to Feb 2016)

COMPANY / ORGANISATION / GROUP
Solent Strategic Land and Infrastructure Board (SSLIB)
Solent Growth Hub
Business South
University of Portsmouth
FSB
Hampshire Chamber of Commerce
IoW CoC
Future Solent
Southampton Solent University
Education Business Partnership
LEP Chairman / Hughes Ellard
Hampshire Fare CIC
Southampton Airport
Wessex Enterprise
Port of Southampton
Marine South East
Hampshire Chamber Asian Network
Solent Business Growth Network
CEO Wightlink / Condor Ferries
Solent Transport
Solent Growth Hub
Camp Wight
Context Printing & Copying
PUSH
Fawley Power Station
Basenet Services Ltd
Rotodama Ltd
Solent LEP Board
Representing Flick Drummond MP
WSP

COMPANY / ORGANISATION / GROUP
Update at meeting and shared Interim Report with Group by email post-meeting
Solent Transport
Portsmouth City Council
Network Rail
Solent Strategic Land and Infrastructure Board (SSLIB)
MP
South Hampshire Bus Operators' Association (SHBOA)
South Western Trains
Hampshire Chamber of Commerce
Fareham College
Business South / Regenerate South
DP World
Highbury College
Port of Southampton
Isle of Wight Chamber of Commerce
Ben Ainslie Racing
Lambert Brothers
Meachers Global
Airbus
South Downs College
SEA
QinetiQ
Wightlink
Wessex Federation of Small Businesses
EEF
Airbus
Regenerate South
Hampshire Chamber of Commerce Planning & Transport Committee
Regenerate South
DP World
University of Southampton Transport Services
New Forest Business Partnership
Hendy Group

COMPANY / ORGANISATION / GROUP
Bryan Jezeph Consultancy Ltd
Eastleigh Council - economic development
First Hampshire
TKL Architects
Meachers Global
Southampton City Council - economic development
2M Transport consulting
Paul Basham Associates Ltd
Sustrans
Southampton City Council - transport
Hampshire CoC - Head of representation
Highways England
Hampshire CoC - Business Development Manager
Network Rail
Solent Transport
Isle of Wight Council
Solent MPs or their representatives:
Flick Drummond
George Hollingbery
Alan Mak
Steve Brine
Andrew Turner
Suella Fernandes
Representative of Penny Mordaunt
Caroline Dinenge
Royston Smith
Caroline Nokes
Mims Davies
Portsmouth City Council
Hampshire County Council
Solent Transport



Credit: Red Funnel Group

STAY IN TOUCH

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We rely on volunteers from across the Solent business community to provide the strategic direction and leadership which drives forward the work of the Solent LEP.

Help us transform the Solent economy by joining the Solent LEP as a Business Member, volunteering on one of our Delivery Panels or standing for election as a Business Director on the Board of the LEP.

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