



SOLENT
LOCAL
ENTERPRISE
PARTNERSHIP

SOLENT LEP CONNECTING GROWTH

The role of transport in connecting the Solent with key markets, and in supporting, safeguarding, and enabling economic growth



March 2014

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1. Purpose and context

This document provides an evidence base to support the Solent Strategic Economic Plan (SEP), and sets out how current strategic and local transport links impact on the Solent economy now and in the future. This annex also sets out the role of transport in connecting the Solent economy with global markets and supply chains, and in supporting, safeguarding, and enabling economic growth in the Solent, and to this end sets out an investment programme focussed on delivery from 2015-16.

The development of this annex has been supported by contributions from the four Local Transport Authorities (LTAs) of the Solent Local Enterprise Partnership (LEP) area who work together through Solent Transport (formerly TfSH) and the Solent Local Transport Body (LTB).

There is a focus on those key strategic interventions that will unlock the economic potential of the Solent economy, our key assets, enable strategic development sites, attract inward investment, and enable existing businesses to thrive. The approach is multi-modal, and sets out proposals for better coordination of strategic and local transport planning and infrastructure delivery. Transport investments are driven by and underpin the economic strategy for the area, as set out in the SEP, and their need and value for money should be viewed within this context rather than as stand-alone transport schemes.

This report first summarises the connectivity of the Solent and why connectivity matters so much to both the competitiveness and productivity of the Solent and the wider UK economies. This focusses on the key strategic routes that connect the Solent economy with UK and global markets, recognising the role the Solent performs as a gateway to world trade.

Second, the opportunities for new housing and employment floor space, which are key outputs of the SEP, are summarised, as this will provide the accommodation to support growth. Transport infrastructure performs a critical role in unlocking sites, and encouraging and accelerating inward investment, playing a key *additionality* role.

Current and future transport constraints are then identified, followed by a summary of the impact of transport constraints on economic growth in the Solent.

A summary of the outputs of recent studies undertaken to identify solutions to the key transport constraints on economic growth in the Solent area, are then provided.

Section seven provides an assessment of the critical transport constraints on economic growth, focussing on the strategic connectivity of the three international gateways and connectivity between Portsmouth and Southampton.

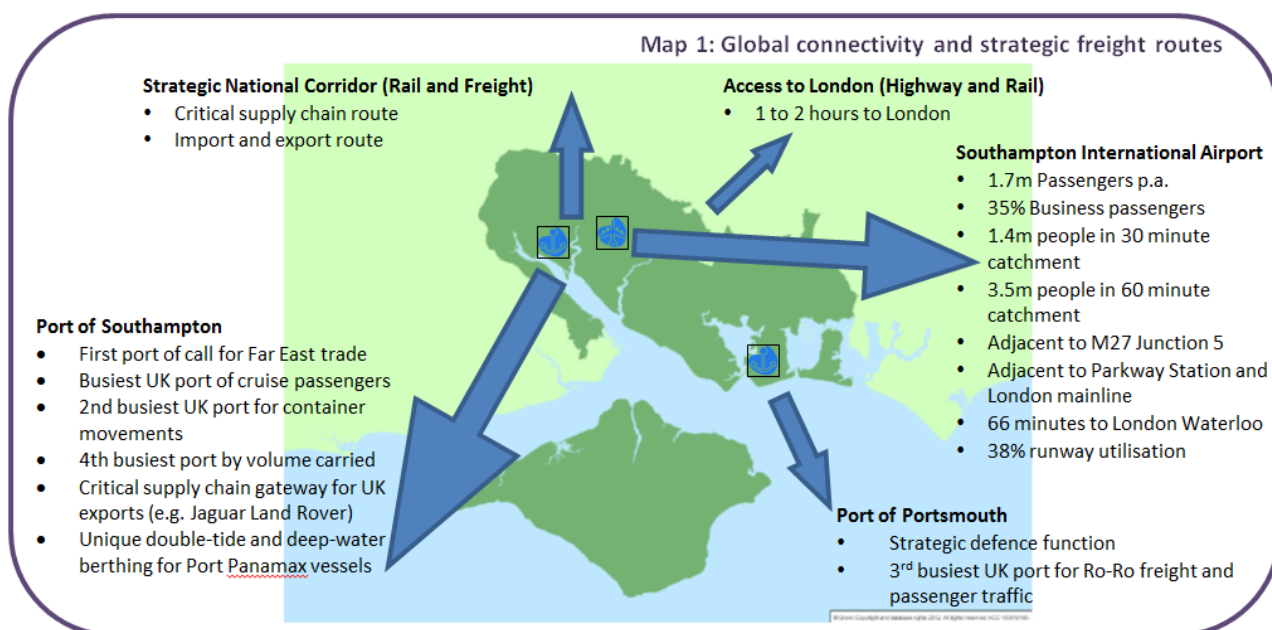
A summary of transport provision and the key constraints, flowing from the evidence is then provided in section eight.

The penultimate section focuses on the key transport requirements that will deliver economic growth and so sets out the transport 'asks' within the SEP. The focus here is on those key interventions that will have a transformational economic impact in improving connectivity and unlocking growth. These key interventions are supported by the transport priorities identified through the LTB process within the constraints of the £19.2m funding envelope. Furthermore, we fully recognise the role of lower-cost transport interventions and that the full transport response tool-kit needs to be deployed so that all modes play a role in providing the transport networks and conditions to enable economic growth. To this end, we set out proposals to work through Solent Transport to deliver a programme of coordinated targeted transport investments that build on work underway through the Local Sustainable Transport Fund (LSTF) and Better Bus Area Fund (BBAF) programmes and how this capital funding could be complemented by LSTF revenue funding (available to LTAs).

The area benefits from an excellent track-record with delivery with current major transport investments such as: Tipner Junction and Park & Ride, Northern Road Bridge, Platform for Prosperity, and the LSTF and BBAF programmes, all being delivered to plan.

2. Connectivity and why it matters

The Solent is important to the national economy, providing a strategic transport hub and gateway to mainland Europe and global markets. There are three international gateways: the Port of Southampton, the Port of Portsmouth (Commercial and Naval Dockyard) and Southampton International Airport. These represent key assets that play a significant and anchoring role within the local economy, attract significant volumes of freight and passenger trips from elsewhere in the UK, and place the Solent economy within a global context that requires excellent connectivity to global markets. Global connectivity and strategic freight routes are shown in Map 1, below.



The recent [KPMG/CBI Infrastructure Survey](#) evidenced this, with international transport connections to emerging markets viewed as either *crucial* or *very important* for almost half (49%) of all companies in making their investment decisions, rising to about 85% for the largest multinational firms.

The Port of Southampton, in particular, is a key national asset and fundamental to the local economy, performing a key role in the supply chain for the UK economy. The Port has seen exceptional growth in recent years and will see huge growth, which is founded on credible evidence. Therefore, connectivity to the Port and the wider Solent area should be viewed in the wider and strategic national context of the productivity and competitiveness of the UK economy.

The Port of Southampton has specific geographic advantages. These include its proximity to the key Shanghai to Rotterdam sea freight route. Southampton is the closest UK Port to this route and is the first Port of call on this route. The Port benefits from a deep-water channel and a unique double tide, providing longer berthing windows.

The Port is currently re-commissioning berths 201 and 202 in the Western Docks into container use in order to accommodate the new, longer and deeper-draughted container ships. By combining berths 201 and 202 to provide approximately 500m of quay with 16m of water depth alongside, the effective capacity of Southampton's container terminal will be restored to accommodate four large vessels. The new berth, which will future-proof container handling infrastructure will be known as SCT5 and will open in Q1 2014. The project is seeing private sector investment of over £150m.

The Port is seeing massive growth across its key sectors. The Port Master Plan has identified that cruise passengers through Southampton will increase 113% between 2005 and 2020, whilst container handling is forecast to increase 95% over the same period.

The cruise sector through the Port of Southampton has grown particularly strongly over the past 10 years. Of the 1.7m British Cruise passengers, over half travel through the Port of Southampton. On average, each docking is worth £1.25 million to the local economy.

Automotives is another growing sector. The number of automotives handled at Southampton rose 72% between 2009 and 2012, when the port handled 31% of UK car exports. Total car traffic at the Port in 2013 was 750,000, with most of the growth coming from exports, to the Far East in particular. The Port is forecasting a 30% rise in car traffic over the next three years, with volumes rising to 1,000,000 units by 2017.

In 2013, independent research ranked the Port of Southampton as the most productive Port in Europe, and the number one performing container terminal in the UK. The findings place Southampton at 20th in the world for productivity, the only port in Europe to feature in the top 20, with an average of 71 container moves per hour. This compares to 49 container moves per hour at the UK's other major container port at Felixstowe.

On the land side the Port has good access to the strategic rail and highway networks, and boasts an impressive 35% rail freight mode share. However, whilst rail access connecting the Port has recently been upgrade with the W-10 gauge enhancement programme, an equivalent up-lift to the highway network has not taken place. Whilst a number of rail freight pinch points remain, and whilst rail freight mode share will increase, the majority of freight is moved by highway and with overall volumes forecast to increase significantly, pinch-points, if not tackled will further worsen journey time reliability.

The presence of the gateways has resulted in clusters emerging within which the Solent is globally competitive. These include marine and maritime, advanced manufacturing, defence, aerospace, and transport and logistics. These are high value added activities that have the potential to fuel export-led growth.

Transport performs a significant role in enabling economic growth. This link is well understood and was evidenced in the UK context in the 2006 [Eddington Transport Study](#). A key finding from the study was that the priorities for transport investment should be on growing urban areas, inter-urban corridors, and the key international gateways. The Solent is a perfect fit as it is the most urbanised areas in the south of England outside London, is growing, is linked by congested inter-urban corridors (between Portsmouth and Southampton, to London, and along the strategic freight routes to the midlands and north), and is home to three international gateways.

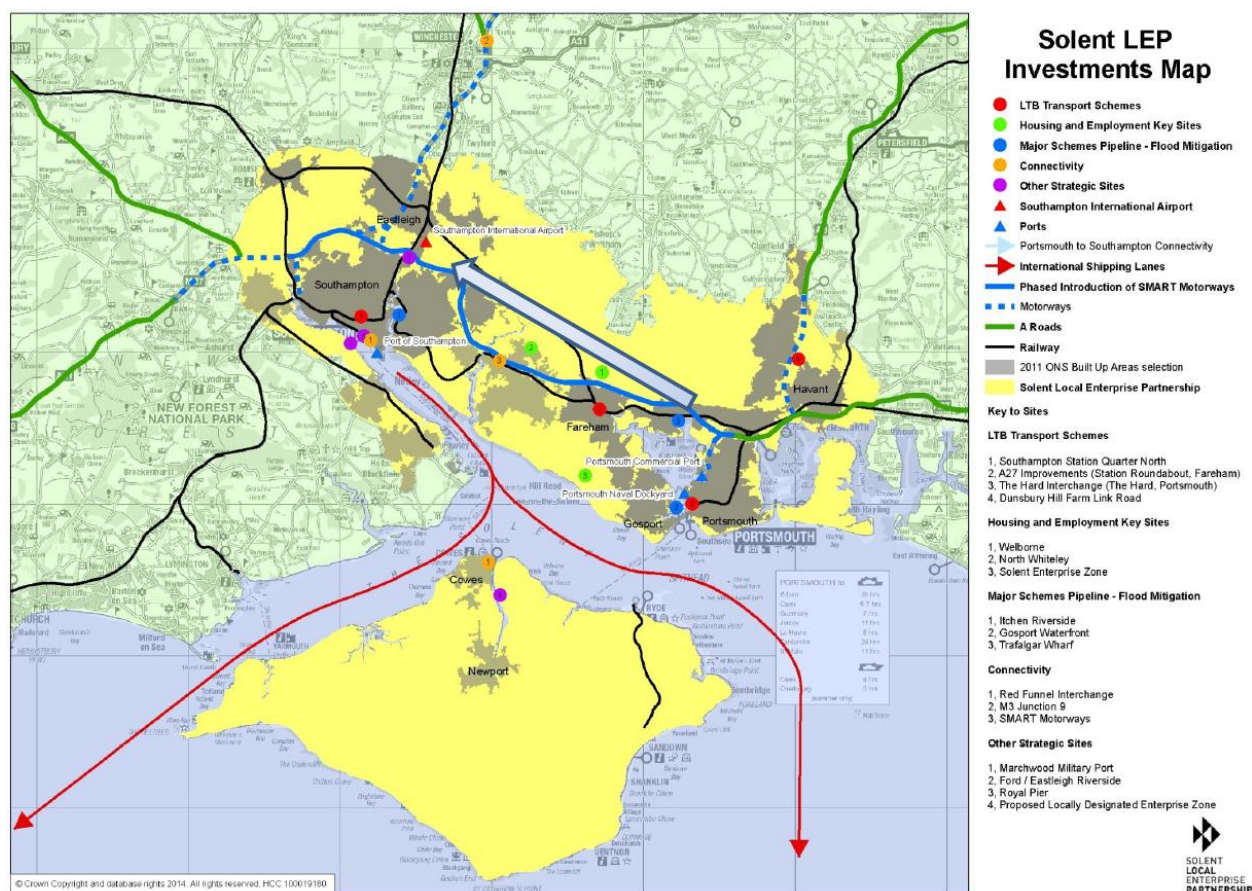
Efficient and well-performing transport networks enable businesses to flourish and attract inward investment. Infrastructure plays a major role, not only in attracting mobile investment, but also as a facilitator or constraint on the expansion plans for businesses. Where infrastructure networks are sufficient, new possibilities are opened up, but where they are limited, businesses – and the economy as a whole – may be missing out on new growth opportunities.

3. Strategic sites

The [South Hampshire Strategy](#) sets out plans for the delivery of 55,600 net additional dwellings, 580,000m² of net additional office floorspace and 550,000m² of net additional manufacturing and distribution floorspace between 2011 and 2026, across the mainland area of the Solent. In addition, on the Isle of Wight, the Local Plan provides for 8,320 net additional dwellings and 42ha of employment land in the period 2011-2027.

Transport infrastructure will play an important role in providing for this level of development. It will unlock and accelerate development at key strategic sites, enabling more challenging opportunities to get away quicker and leverage in private sector investment. However, there will also be an aggregate impact of this level of development, which will be managed through sustainable planning, but will inevitably impact on what are already significantly congested networks, without mitigation. This is covered in section 5. A number of strategic development opportunities exist in the Solent. These are shown on map 2.

Map 2: Strategic Development Opportunities in the Solent



4. Current and future transport constraints

The area benefits from a strong transport evidence base, providing an excellent understand of the current and future transport network situation and the impact that this will have on economic growth prospects. The Sub-Regional Transport Model (SRTM) is consistent with DfT [WebTAG](#) and has been developed by TfSLoW in partnership with the Highways Agency, Network Rail, DfT and PUSH. Importantly, the SRTM suite of models includes a local economic impact model (which factors in new development) and a Gateway Demand Model, which factors in forecasts in port-related traffic. The SRTM has been used to model the future situation following planned growth, and so provides us with a robust evidence base to understand transport constraints and to plan for solutions. The future situation shows what will happen if no new transport interventions are delivered – other than those already committed.

Current Transport Situation

- Over 3.2m person trips starting and/or finishing in the Solent area are made each day
- Just under 2.8 million of these are contained within the area
- The majority of trips are made by car (70%)
- Use of the car dominates journey to work trips (59.9%)

Highway

- 36% of all highway trips are less than 5km; this increases with population density, with 68% of highway trips in the most densely populated areas under 5km.
- 28% of all traffic on the M27 completes journeys of 5km or less
- 30% of all traffic travel only 2 junctions, with over 50% travelling between 1 and 4 junctions. The largest single proportion of all traffic travels only 1 junction on the motorway (15.5%).
- For HGVs only, most travel 6 junctions (14%) – there are six junctions between Port of Southampton and M3 Junction 9 with the A34

Public Transport and Rail Freight

- 62,646 daily public transport boardings (Southampton 34% and Portsmouth 25%)
- Section of rail route between Basingstoke to Southampton Central heavily used by a mix of passenger and freight services
- Portsmouth Stations and Southampton Central and the routes approaching these stations are also operating close to capacity
- Significant pinch point in the form of the single track section between Botley and Eastleigh
- Services from Portsmouth and Southampton to London use a common section of the South Western Main Line between Woking and London Waterloo. Capacity constraints at Clapham Junction in particular mean that this section is operating at full capacity in the AM peak, so no additional services from the area to London can be accommodated during this period.
- A number of sections of the bus network where bus speeds are less than 10kph

Walking and Cycling

- Walking and cycling account for 25% of all daily trips
- The two cities have high levels of walking and cycling use in absolute terms, although Gosport has the highest levels of walking and cycling as a proportion of all its trips (37%)

Containment

- High containment of travel in cities
- Only Portsmouth, Eastleigh and Winchester are net importers of labour
- While Gosport's level of containment is the highest (outside of the two cities), it is one of the largest net exporters of labour in percentage terms, resulting from a low job density of 0.48

Future Transport Situation¹

- Total trips increase by 11% between 2010 and 2026 (Car 13%; public transport 3%; active modes 5%)

Highway

- Increased demand for the highway network is particularly concentrated on the M27, M3 and A3(M), but also on radial routes into Southampton, Gosport and Portsmouth
- Vehicle time spent in queues is forecast to increase by 53% between 2010-26 (greatest on the M3 and M27 and also on the radial routes into our cities)
- In the AM peak period, the M27 will see increased demand. This will take demand close to or above the design capacity at the following locations:
 - Junctions 2 to 4 Eastbound;
 - Junctions 8 to 9 Eastbound;
 - Junctions 10 to 12 Eastbound;
 - A3023 (Havant) to A3(M) Eastbound;
 - A2030 (Portsmouth) to M27 Westbound;
 - Junctions 7 to 5 Westbound; and
 - Junctions 4 to 3 Westbound.
- Significant growth in traffic on the M275 northbound between the A3 Mile End Road and the M27
- Largest growth in traffic on M3 occurs between junctions 9 and 12 southbound and a number of links in this vicinity will be close to their design capacity. Forecast growth on the M3 northbound between junction 12 and 11 would also take this link above the design capacity.

Public Transport

- Overall demand for public transport is forecast to increase by just 3% between in 2010 and 2026
 - AM peak boardings are forecast to increase for rail (9%) and ferry (1%), but fall for bus use (-1%)
 - Incidences of bus delays on the network will increase, particularly on the radial routes into our cities
- The performance and capacity constraints of existing rail infrastructure and operations stop rail playing a more significant role in accommodating east / west movements and increase pressure on the M27

¹ Forecasts based on a do-minimum scenario in which no new interventions are delivered other than those already committed.

5. Impact of transport constraints on economic growth in the Solent

A study by Atkins² estimated a total cost of congestion of up to £0.4 billion per annum in Hampshire and £0.1 billion per annum in each of Portsmouth and Southampton. These forecasts suggest that the impact of congestion in eroding productivity potential will be greater in the Solent than the South East average, indicating that the 'loss' of potential GVA would be at least 1.3% by 2025.

Furthermore, the role of the Solent as an international gateway, providing connections between the UK and international suppliers and markets, means that the impacts of congestion in the Solent area have much greater significance. In addition to the 'direct' impacts of congestion on driver time and fuel costs, there will be wider impacts on logistics scheduling, business costs and overall competitiveness of the UK economy.

Increasing levels of congestion in the Solent area will also constrain future job creation. Previous work for Solent Transport³ demonstrated that, if there were no worsening of travel conditions, there would be growth of around 44,000 jobs between 2006 and 2026, from a base of 435,000 jobs in the defined study area. However, if there were no investment in the transport network (i.e. travel conditions worsen from existing) only 36,000 jobs would be created. This shortfall in future job creation would be equivalent to around 1.7% of future output.

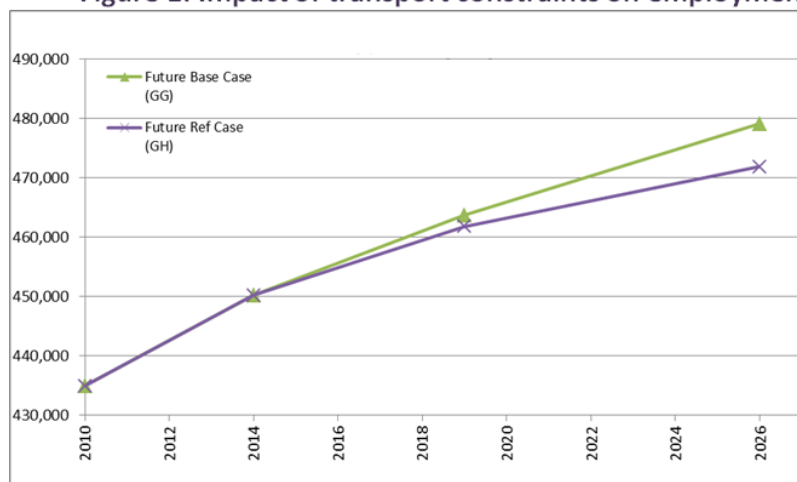
From 2014, transport constraints reduce growth of both population and employment. This will impact on the contribution that the Solent can make to the UK economy.

The impact of the transport constraints on population and employment growth have been modelled and are shown in the graphs below. In both instances the base case is shown by a green line, whilst the impact of transport constraints is shown by a blue line. This shows that from 2014, transport constraints reduce growth of both population and employment. This will impact on the contribution the area can make to the UK economy and have implications for the competitiveness of our businesses and the quality of life of our residents.

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Whilst figures 1 and 2 demonstrate the impact of transport constraints on employment and population growth in the aggregate, there is likely to be a wider and more fundamental impact on specific components of the Solent economy, most notably the competitiveness of the Port of Southampton. Congestion

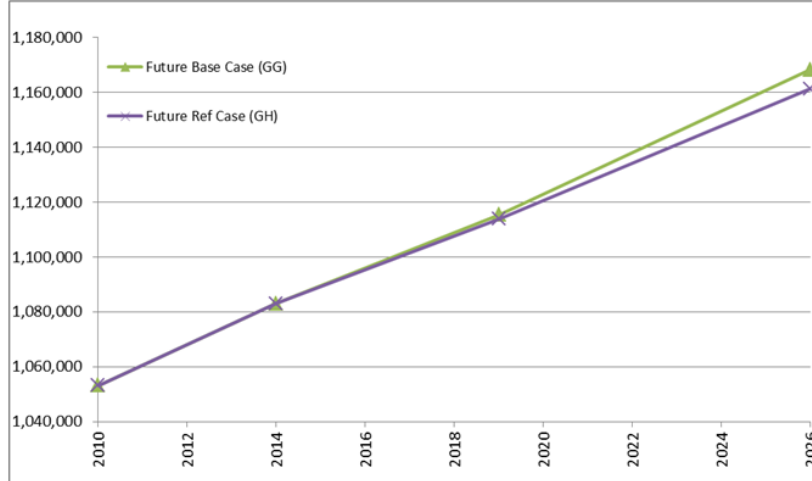
Figure 1: Impact of transport constraints on employment



² Economic Costs of Congestion in the Regions, Atkins, April 2008, available at http://www.ied.co.uk/images/uploads/Economic_costs_of_congestion_-_final_for_issue_tcm9-35329.pdf

³ Solent Transport (2013) Transport delivery Plan. Available online at: <http://www3.hants.gov.uk/tfsh/tfsh-what-tfsh-does.htm>

Figure 2: Impact of transport constraints on population



and unreliable journey times are impacting the Port, and these are forecast to worsen in the future. In an increasingly competitive operating environment, with increasing levels of freight coming into the UK and with growth in export sectors such as automotive and in the cruise sector, there is a need to invest in the strategic highway routes into the Port.

In 2008, Atkins undertook a study of the costs of

congestion in England's regions. This showed high levels of congestion on the corridors between London and adjacent areas, including the Solent, and indicates a total cost of congestion of up to £0.4 billion per annum in Hampshire and £0.1 billion per annum in each city. The impact of congestion in eroding productivity potential is greater in the Solent than the South East average, indicating that the 'loss' of potential GVA would be at least 1.3% by 2025. However, the role of the Solent as an international gateway, providing connections between the UK and international suppliers and markets, means that the impacts of congestion in the Solent area have much greater significance. In addition to the 'direct' impacts of congestion on driver time and fuel costs, there will be wider impacts on logistics scheduling, business costs and overall competitiveness of the UK economy.

6. The role of transport in supporting the Solent economy

The Solent LEP, in partnership with Solent Transport, has commissioned independent work to assess and identify the key transport interventions that have the potential to transform the Solent economy. The study has built on previous work undertaken by Solent Transport by considering the strategic connectivity of the Solent with key UK and global supply chains and markets, and benchmarking potential economic impacts. The study made the following recommendations.

Highway interventions to improve capacity and competitiveness of the Port of Southampton, strategic freight movements, and provide the conditions for growth in the logistics sector:

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| <ul style="list-style-type: none"> • Significant junction improvement at A34 / M3 Junction 9 to improve freight (and all motorised traffic) journey time reliability. <ul style="list-style-type: none"> ◦ Work with HA to make the case for intervention through the Route Based Strategy (RBS) programme ◦ Build multi-LEP support for this intervention • M3 at Winchester: address impacts of gradients through introduction of Active Motorway Management between junctions 9 – 14 <ul style="list-style-type: none"> ◦ Work with HA to make the case for intervention through the RBS programme • M3 Junctions 14-12: manage conflicting movements <ul style="list-style-type: none"> ◦ Work with HA to make the case for intervention through the RBS programme | <ul style="list-style-type: none"> • M27 West: Active Motorway Management to ensure reliability for port access between junctions <ul style="list-style-type: none"> ◦ Work with HA to make the case for intervention through the RBS programme • Improve junction of M271 and A35/A33 and allied improvements to Millbrook roundabout to port. • Investigate potential for intercepting port traffic (freight and cruise) at Dock Gate 20 to minimise conflict between port-bound and city centre-bound traffic. • M27 East: Active Motorway Management between junctions 5 and 12 to better meet needs of diverse users <ul style="list-style-type: none"> ◦ Work with HA to make the case for intervention through the Route Based Strategy programme |
|--|--|

Rail journey time between Portsmouth and Southampton and between the Solent and London

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|---|--|
| <ul style="list-style-type: none"> • Improve journey time by rail between Southampton and London and Portsmouth and London. <ul style="list-style-type: none"> ◦ Lobby through the SEP and build multi-LEP support for improved journey time from the Solent area to London. • Commission work to fully investigate the potential for improved rail connectivity between the two cities. Lobby for this through the SEP and make the case that the “reactive” planning approach of Network Rail does not unlock growth potential. | <p>Benefits include</p> <ul style="list-style-type: none"> • improved labour connectivity • Improved business connectivity • Improved agglomeration • Wider labour pool • Airport catchment extended eastwards • Mode transfer from the car and reduction in congestion on the M27 |
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Airport growth

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| <ul style="list-style-type: none"> • Undertake research to understand international connectivity needs of existing business community and inward investors. • Establish extent of existing unmet need at Southampton – businesses using other airports for access to European cities. | <ul style="list-style-type: none"> • Develop profile of Southampton in serving a wider catchment area – north towards London and eastwards along South Coast. |
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Capacity for Growth at the Port of Southampton and the Potential for Portcentrics

- Work with the Port of Southampton and Local Planning Authorities to identify land requirements for the Port of Southampton and logistics provision.
- Commission work to investigate the potential of portcentrics in the Solent area, focusing on sites, prioritisation of those sites, and attracting logistics companies to the area.

Cross-Cutting Themes

- Connectivity between the two cities is compromised by slow highway journey times in the peak on the M27, and rail journey times and service frequencies are wholly inadequate. This is impacting on productivity and limiting

employment horizons. It is also a barrier to inward investment. A coordinated approach to infrastructure funding should be adopted, which brings together Network Rail, the Highways Agency, Local Transport Authorities and the Solent LEP in a task force to align public and private investment. Improving journey times between the two cities could have a transformational impact on the Solent economy.

- Network Rail and the Highways Agency forward plan independently, and this is inappropriate in the Solent context.

The development of a number of the highway interventions are being taken forward by either the Highways Agency or the Local Transport Authorities, and are identified in the investment programmes in sections 7 and 8.

In addition to the above recommendations, Solent Transport, in 2013, published a [Transport Delivery Plan](#) (TDP), which set out a series of transport interventions to accommodate and provide the conditions for economic growth. The TDP identified that a cross-modal approach will achieve best use of transport networks. Mode shift should be focussed on providing alternative travel options for those journeys that are currently made by car that can switch to an alternative mode for a specific journey – not necessarily all their journeys. The alternative could be public transport, cycling, walking or home-working. There are many reasons why the car will continue to be the most important mode of travel in the Solent and will continue to need to be provided for (complex trip-chains, bad weather, time constraints, shopping, perception of safety...), but if only a small proportion of car journeys shift mode – where and when they can – then the highway network will run more effectively and efficiently and realise benefits to businesses.

The right planning policies can help transport perform more efficiently. An underlying trend in the spatial distribution of employment opportunities over the past 15 years has been a migration from the urban core to the rural periphery, where employment growth has been strongest at 21%. Much of this growth in employment opportunities has developed along the M27 corridor. City centres have a particular role to play in supporting economic growth, as hubs of economic activity where people and business congregate in a small area, increasing opportunities for interaction and agglomeration.

Transport networks need to be resilient. Maintenance programmes of highway and rail networks are critical to ensure that their capacity, operation or safety is not compromised. The Solent, and in particular routes to and from the Port of Southampton, require disproportionately high levels of remediation owing to the significant level of HGVs that use the roads. Damage to road networks across the country by the wet summer and long cold winter of 2012/13 has brought with it an increased maintenance burden – and this is likely to continue as we see more extreme weather conditions. In the KPMG/CBI Infrastructure Survey, discussed above, 88% of firms identified *Investment in maintenance* and *congestion* as their main concerns about roads.

7. Connecting and enabling growth in the Solent

Connecting the Port of Southampton

The Solent economy enjoys good connectivity with markets and supply chains through good highway, rail, sea and air connectivity. However, whilst connections are good, congestion and journey time reliability are significant issues that undermine competitiveness and productivity and will undermine forecast growth at our thriving and internationally competitive port operations in Southampton and Portsmouth.

The Port of Southampton is the first port of call for trade with the Far East and has invested heavily in developing its capacity to handle the largest container ships operating. This places the Port at the heart of UK import/export trade and provides a fundamental economic asset for Solent economy. However, the port does not benefit from direct access from the Strategic Road Network, which creates a significant pinch point on the first / last leg of journeys to and from the Port and impacts on not only the competitiveness of the Port, but also the ability of the City Centre to grow. In addition, access to the port is constrained at a number of pinch points further away from the immediate vicinity of the port, most notably at M3 junction 9 (intersection with the A34) and at the M27 / M3 route in between.

Long delays are experienced by southbound traffic on the A34, caused by traffic signals at the roundabout, with traffic required to manoeuvre through the roundabout before joining the southbound M3 slip road. These delays are forecast to worsen in the future. Northbound traffic from the M3 towards the A34 also passes through the roundabout, but delays are less severe and it is considered that a practical solution to increase traffic on this approach could be delivered more easily.

The Solent to Midlands RBS, which is being developed by the Highways Agency, identifies the A34 southbound link to the M3 at Winchester (at M3 Junction 9) as the least reliable link on the route, with just 54.1% of the vehicle miles completed on time. This suggests considerable capacity issues on this section, which is the 22nd least reliable on the entire Strategic Road Network.

The highest percentage of freight traffic on the London to Solent RBS route is 26.8% southbound between junctions 9 and 10 of the M3. This is significantly above the national average for the SRN of 14.7% and evidences the key function this link and junction perform within the supply chain. Evidence from the Sub-regional Transport Model (SRTM) has identified that for HGVs only, most travel 6 junctions (14%) – there are six junctions between Port of Southampton and M3 Junction 9 with the A34.

The Solent LEP and its transport partners have together attended engagement sessions run by the Highways Agency and provided detailed commentary on drafts.

The Junction is demonstrably of strategic importance, with both local evidence and Highways Agency Evidence confirming this. In research conducted by the Solent LEP, 61% of stakeholders (predominantly business) identified that investment should be prioritised.

The need for government to support the role of ports through improved transport infrastructure was made strongly in the recent House of Commons Transport Committee Report on [Access to Ports](#). Indeed, the report recommends that the *“DfT must do more to ensure that LEPs give proper consideration to port schemes and are not overlooked because they might not obviously benefit local people or businesses.... The Department should also be prepared to challenge decisions by LEPs and other local bodies where they fail to prioritise improvements in port access over other, less strategically important, schemes.”*

Major improvements are required to tackle the problems at this junction and Hampshire County Council has commissioned a study to consider potential options, which are currently being developed. The early assessment work indicates that more modest schemes, to improve capacity at the existing roundabout, would not be adequate in reducing traffic delays at the junction. Other alternatives include provision for alternative access arrangements to Winchester in order to free capacity for strategic traffic using Junction 9. However, strategic traffic would still be required to use the existing roundabout, which would reduce potential benefits.

Early assessment work indicates that the best performing options, in terms of economic benefits, would be schemes that provide direct free-flow links between the A34 and M3. These options are forecast to significantly reduce through-traffic at the junction, which would also reduce delay for more local traffic. Overall delays in the peak hours would be reduced by 65-90%.

There is a requirement to provide significant improvements to reduce delays between A34 and M3 to improve access between the Solent area and Port of Southampton and other parts of the UK. A grade separated south bound link between the A34 and the M3 would provide a significant positive impact on supply chains along this strategic national corridor, and improve competitiveness of the Port and the wider Solent economy. The scheme has been identified as a priority by the Solent LEP and the Enterprise M3 LEP.

Improving Portsmouth to Southampton Connectivity and Unlocking International Gateways

The role of the Port of Southampton is described above. In Portsmouth, the Naval Dockyard and the Commercial Port are significant defence and economic assets to the UK. Through cross-channel operations from Portsmouth the Solent area plays an important connecting role for the UK with mainland Europe and beyond. Direct access into the Port has been provided recently, which has removed the city-centre / port conflicts that negatively impact on the highway network in Southampton.

Southampton International airport completes the triangle of international gateways offered in the Solent. Performing an important business passenger role, the airport flies to 43 destinations across the UK and Europe, and connects to long-haul destinations through Schiphol, in Amsterdam. Access to the airport is provided by junction 5 of the M27 and the adjacent mainline Southampton Parkway station.

Clustering of businesses that are intrinsically linked to these international gateways has developed, and it will be critical that land-side transport connectivity to these assets is strengthened to ensure their on-going competitiveness and growth.

Accessibility across the area is strongly influenced by its coastal nature and the five main rivers crossing the area. Southampton Water and the River Test separate the urban Waterside area in the New Forest from the city of Southampton; the River Itchen represents a major river crossing within Southampton; The Hamble River and Portsmouth Harbour give Gosport its peninsula characteristics; the city of Portsmouth is predominantly contained within Portsea Island; and the Medina dissects much of the populous north of the Isle of Wight. This effectively creates a number of peninsulas across the mainland, making inter-urban travel opportunities more difficult to provide.

The distance between Southampton and Portsmouth is just 20 miles. The journey by road takes between 30 minutes and 45 minutes in the peak hours, although traffic congestion and bottlenecks on the M27 and A27 can increase this significantly. However, rail connectivity between the two cities is poor. It takes from 45 minutes up to 1 hour 5 minutes, with only two to three direct connections per hour and two services requiring a transfer in Fareham.

The motorway and rail infrastructure are intrinsically linked. A combination of slow journey times and poor service frequency on the rail network result in the M27 being the preferred option for city to city movements. As a consequence the M27 suffers significant peak congestion. The constraints on city to city movements are impacting on the productivity and competitiveness of businesses in the Solent and reduce the attractiveness of the area to inward investment. The M27 is used as a local distributor road, aided by close proximity of junctions, yet also caters for significant volumes of strategic freight movements to / from the Ports, and as such has been identified by the Ports as a key constraint on growth.

Key Motorway Issues

Of the 3.2m person trips starting and/or finishing in the Solent area each day, the majority of trips are made by car (70%), whilst the car dominates journey to work trips (59.9%)

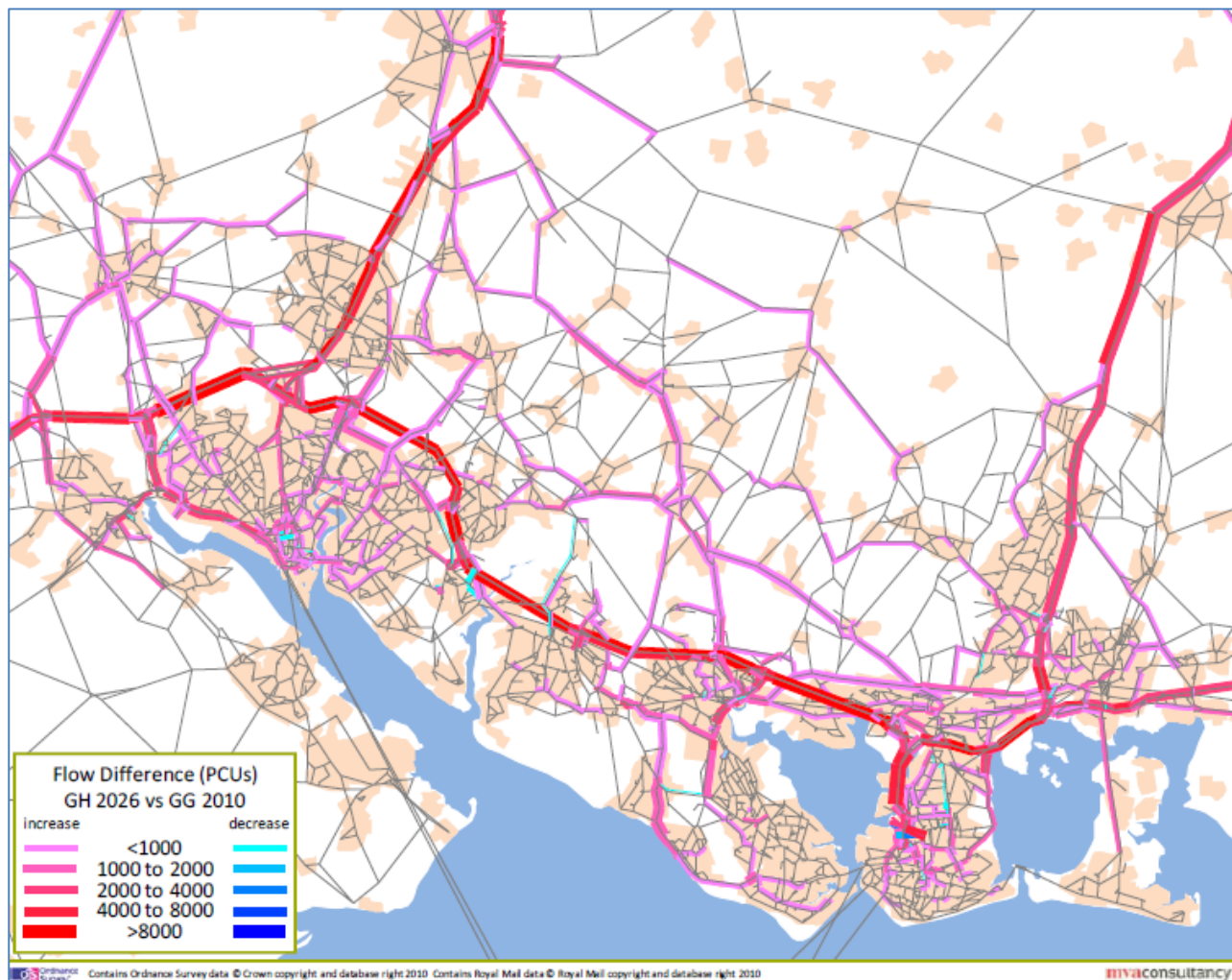
Transport modelling by Solent Transport has forecast that total trips by car are forecast to increase by 13% between 2010 and 2026. This increased demand for the highway network will be particularly concentrated on the M27, M3 and A3(M). Vehicle time spent in queues is forecast to increase by 53% between 2010-26

(greatest on the M3 and M27) and in the AM peak period, the M27 will see increased demand that will take demand close to or above the design capacity at the following locations:

- Junctions 2 to 4 Eastbound;
- Junctions 8 to 9 Eastbound;
- Junctions 10 to 12 Eastbound;
- A3023 (Havant) to A3(M) Eastbound;
- A2030 (Portsmouth) to M27 Westbound;
- Junctions 7 to 5 Westbound; and
- Junctions 4 to 3 Westbound.

The largest growth in traffic on M3 will occur between junctions 9 and 12 southbound and a number of links in this vicinity will be close to their design capacity. Forecast growth on the M3 northbound between junction 12 and 11 would also take this link above the design capacity.

The map below shows change in highway flows between 2010 and 2026 in the Solent area in the AM peak. This shows significant increases in traffic on the sub-region's motorway network.



Key Rail Issues

Two routes are available to make journeys 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. It is also single track for much of the route, which significantly affects line capacity.

Taking into account service frequencies, the total journey time between the two city centre stations is, therefore, between 75 and 95 minutes.

This poor level of service by rail is a key factor that has encouraged high levels of more local traffic on the M27. Whilst a relatively small proportion of traffic travels the full distance between Portsmouth and

Southampton, the poor rail service also means that the car is the most attractive option for shorter movements in the east-west corridor, with resultant junction-hopping and congestion on the motorway.

The poor levels of connectivity by rail are a key factor in the limited levels of interaction between the two cities. For example, recent work by the Centre for Cities⁴ demonstrated that the labour markets for the two cities are distinct, with very little commuting between the two cities, and limited overlap in areas such as Fareham. The total journey times by rail between the two cities (75-95 minutes, as highlighted above) are a clear impediment to interaction between the cities. These long journey times also act as a barrier to interaction between businesses in the two cities.

The factors determining the duration of the journey between Southampton and Portsmouth are:

- Constraints around the Southampton tunnel;
- Maximum line speeds along the Netley and Botley lines;
- Numbers of stops between the two cities: the slowest train from Southampton stops at St Denys, Bitterne, Woolston, Sholing, Netley, Hamble, Bursledon, Swanwick, Fareham, Portchester, Cosham, Hilsa, Fratton, Portsmouth & Southsea and Portsmouth Harbour; and
- No direct link between Portsmouth and Southampton via the Botley line.

The Solent can be compared with other UK 'bi-polar' city regions, in which there are two key economic centres. These include Nottingham and Derby at the centre of the D2N2 LEP area, and Newcastle and Sunderland in the Tyne and Wear City Region. Nottingham and Derby are 16 miles apart but rail journey times between the two cities range between 23 minutes and 37 minutes. Newcastle and Sunderland are 15 miles apart: rail journeys between the two cities take between 18 minutes and 30 minutes.

In the case of Portsmouth and Southampton, long journey times by rail are a significant barrier to interaction between the cities, particularly in the operation of the labour market and business clustering effects. Reducing rail journey times between the cities could deliver major benefits, in terms of expanding employment horizons, labour markets and access to customers and supply chains.

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 a sub-regional transport hub, providing longer-distance rail connections to London, as well as the Midlands and North (via Cross-Country Trains) and local connections within the Solent area. The station offers the shortest distance to the airport terminal of any UK airport, and the rail mode share for access to the airport is relatively high.

Whilst excellent connections are available on the main line on the north-south axis, access from the east is very poor. Journey times from Portsmouth & Southsea to the Airport vary between 51 minutes and 1 hour 7 minutes over a distance of only 20 miles. The primary option for travel from Portsmouth to the airport is via the Netley line, which requires a change of trains in Southampton. The Botley line, which connects Fareham and Eastleigh, does not provide good connections with the airport.

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.

⁴ Anchoring growth: An economic assessment of the Solent area, Naomi Clayton, Rachel Smith & Joseph Sarling, May 2013, Centre for Cities

8. Summary of transport provision and key constraints

Provision	Key Transport Issues
Strategic Road Network (SRN) <ul style="list-style-type: none"> Comprises the M3, M27, A27(T), A3(M), M271 and M275. M3 connects to A34 at junction 9 and provides a key strategic national freight corridor to the north, used by key UK exporters such as Jaguar Land Rover M3 and A3(M) provide connections to London M271 and M275 provide access into Southampton and Portsmouth, respectively (and their ports) SRN mostly operated by the Highways Agency A33/A35 part of Strategic National Corridor infrastructure but operated by SCC Part of M275 operated by PCC 	<ul style="list-style-type: none"> No direct access into the Port of Southampton Significant congestion at M3 junction 9 with A34 impacts supply chains M27 and M3 heavily congested in the peaks Close proximity of junctions and gradient changes cause congestion and unreliable journey times M27 used as a local distributor road, as well as for strategic traffic Conflicting uses of access into Port of Southampton (Port-related / City Centre-related) causes congestion at Redbridge roundabout / A33
Rail <ul style="list-style-type: none"> Direct passenger services to London from Southampton and Portsmouth W10 Gauge between Southampton and Midlands to enable high cube containers to be moved by rail (35% rail mode share for containers from Port of Southampton) Rail integrated with port operations at Southampton Two east / west railway lines (one direct between Southampton and Portsmouth) Integrated with cross-Solent ferry at Portsmouth and airport at Southampton A rail freight terminal at Fratton to serve the Port of Portsmouth has recently been established 	<ul style="list-style-type: none"> Journey times between the two cities are extremely slow. This results in low demand and added pressure on the M27 No direct connection between the Airport and the east results in market capture constrains and increased use of M27S low journey times between Southampton / Portsmouth and London dilute geographic advantage and act as barrier to trade and employment opportunities Densely populated area with a number of intermediate stations between Solent and London slows down journey times Utilisation of the available track capacity is high on a number of rail routes in the area, limiting the scope for running additional services Significant infrastructure constraints between the two cities and between the Solent and London result in slow journey times and capacity issues Underused rail freight terminal at Fratton
Bus <ul style="list-style-type: none"> Extensive network of bus services within and connecting the main urban areas Main operators in the area include Bluestar and Vectis (Go South Coast), First, Stagecoach and Black Velvet Short Bus Rapid Transit provision in Gosport Long distance coach services operated by National Express and Greyhound amongst others 	<ul style="list-style-type: none"> Limited and less frequent services to/ from the smaller settlements causes accessibility problems Subsidy levels being reduced by Local Authorities
Ferry <ul style="list-style-type: none"> A number of ferry services operate between the Isle of Wight from Portsmouth and Southampton Local ferry services offer important links between Gosport and Portsmouth, Hythe and Southampton, Hayling Island and Portsmouth, and Hamble and Warsash 	<ul style="list-style-type: none"> Changes to Sulphur content of marine fuels will result in operators incurring additional costs through technological alterations and cleaner fuels
Air <ul style="list-style-type: none"> Serves 43 UK and European destinations Long-haul connections through Schiphol 	<ul style="list-style-type: none"> Access from the east by rail is very poor

- | | |
|--|--|
| <ul style="list-style-type: none">• Direct access from M27 at junction 5• Adjacent to mainline railway station at Southampton Parkway | |
|--|--|

9. Transport infrastructure investments

Based on evidence there is a clear and mutually supportive package of investment that is required to support the Solent Strategic Economic Plan that enables our key assets to grow and unlock key development opportunities.

The Port of Southampton is a key economic asset both locally and nationally. However, its ability to remain competitive will be compromised in the absence of targeted investments in transport infrastructure, in particular at the immediate approach to the Port (see Marine Plan) and further away on the strategic routes into it, most notably at M3 Junction 9 and on the sections of motorway between the Port and M3 Junction 9. At Junction 9 a major improvement is required that enables the free-flow of traffic south-bound from the A34 to south-bound on the M3. Improvements are also required to better accommodate north-bound traffic through this junction. Allied to this the introduction of demand management (such as managed or active motorways) on the M3 south of Junction 9 and the M27, M271 and M275 would enable the current motorway to work more efficiently and effectively. We note that feasibility work to take forward managed motorways was announced in the June 2013 Spending Review and this work should be accelerated.

In order to facilitate the strategic growth opportunities in the Fareham / Gosport peninsula, there is a requirement for a package of transport investments that unlock opportunities for strategic housing and employment growth at the Solent Enterprise Zone at Daedalus and at the 6,000 home Welborne development. These interventions are likely to include an upgrade to an all-moves junction at Junction 10 of the M27, associated junction improvements on the local road network to facilitate the Welborne development and a new highway access to the Solent Enterprise Zone. An expansion of the Bus Rapid Transit offer will also play an important role in providing sustainable access to Welborne and will be integrated within the highway works.

In addition, in order to accelerate the delivery of a strategic housing site at North Whiteley, at Junction 9 of the M27, there is a requirement for a new highway to be constructed joining the existing Whiteley Way with the highway network to the north. This construction of this road will unlock 3,500 new homes.

Rail needs to play a far greater role in accommodating Portsmouth to Southampton movements across the sub-region, and better connecting the airport with the east. This will relieve pressure on the M27, improve labour and business interaction between the two cities and the areas in between, and provide improved rail access to Southampton Airport from the east. The current reactive approach to network planning by Network Rail has a frustrating effect on growth potential. Current rail demand between Portsmouth and Southampton is low because journey times are slow and services are infrequent. This results in east / west movements being concentrated on the M27.

A joined up approach is required whereby investments from the Network Rail, Highways Agency and Local Growth Fund are pooled and solutions to problems planned on a cross-modal basis. The current separate forward planning by Highways Agency and Network Rail is inappropriate in the Solent context and is impeding growth. In consideration of this, the Solent LEP would like a memorandum of understanding with the strategic network providers to bring forward comprehensive solutions to the Portsmouth to Southampton movements in the Solent, and in so doing relieves pressure on the M27, increases economic interaction between the two cities, broadens labour pools, and significantly improves access to the airport from the east.

We will also work with other LEP areas to encourage investment into the capacity constrained rail routes into London. We recognise that this is an issue that is not specific to the Solent LEP, but are extremely concerned that the current varied journey times available from the Solent to London are impacting on the attractiveness of the Solent for inward investment and that the geographic advantage of proximity to London that the area benefits from is being eroded by faster journey times from other parts of the UK and will be eroded further when HS2 is delivered.

In addition, to the above strategic transport investment priorities outlined in this section, we have assessed and prioritised four shovel-ready transport schemes through the Solent LTB. An additional scheme – Cross-Solent Interchanges – which performed best when assessed by the LTB, but, at that time was not expected to be deliverable from 2015-16, is now in a position to deliver in 2015-16. As this scheme provides a significant uplift to the connectivity of the Isle of Wight with the mainland, we are seeking funding for this scheme through the LGF.

Unlocking Key Sites for Housing

We are seeking funding for the following schemes through the Local Growth Fund.

Site	Description
Welborne	Welborne is a planned 6000 home development North of Fareham which will include 112,000sqm of employment floor space. It is being designed with a garden city theme and will include employment sites, schools and other amenities. Unlocking the site will require key infrastructure developments, unlocking both the housing and commercial development and triggering further private sector investment. The proposed infrastructure package will deliver new and improved strategic transport infrastructure (an all moves M27 Jct 10) which is essential to kick start development at Welborne as well as to enhance capacity and network resilience over a wider area.
North Whiteley	The North Whiteley Strategic Development is included in the Winchester City Council Local Plan Part 1. It is a strategic growth area which will provide 3,500 new homes and associated infrastructure. Support is required for a major new transport link serving both the proposed growth area and the existing community of Whiteley which at present has only one main highway access onto the M27. Deliver this important piece of infrastructure which will help to unlock this key growth area.
Marchwood military port	The release of some of the 300-acre MOD owned Marchwood Sea Mounting Centre in Hampshire, with excellent rail connections and wharfs, has the potential to unlock some maritime growth across Southampton's waterways. It is recognised that the MOD are looking at the dependency of the military in relation to a continued presence at the site alongside possible space for commercial use. The conversion of commercial space at Marchwood may come forward as part of any disposal proposition.
Dunsbury Hill Farm	Adjacent to Junction 3 of the A3(M) is a 13 hectare development area identified to develop a large employment scheme. The proposal is to develop a 'state of the art' employment scheme which will enhance further, the economic prosperity of South Hampshire. The development, formerly known as Dunsbury Hill Farm will create a high quality business and technology park of regional significance. A new access road through proposed to unlock strategic employment site.
Solent Zone Enterprise	A first phase of development of the Solent Enterprise Zone is underway. Further phases of development are now being planned and will generate further momentum. A significant new initiative is to plan a comprehensive master planned development of the Gosport Waterfront likely to be launched in 2014 but delivered from 2015/16 onwards, designed to exploit the maritime setting of the Zone. Off-site road improvements are being made to deliver better linkage between the M27 and the EZ, however, transformational action is required which will provide a new

	alternative route to the Gosport Peninsula to relieve the extreme congestion of the existing main road link from the motorway, the A32, including: the Stubbington Bypass and improvements to the southern section of Newgate Lane.
Locally designated Enterprise Zone on the Isle of Wight	A significant area of the Isle of Wight has been provisionally designated as an Assisted Area within the current review and hopes to have that confirmed later this year. A supply of ready sites, preferably with suitable incentives, are vital for an area to make best use of the status. We propose to designate a portfolio of sites for a local Enterprise Zone within Cowes and East Cowes and establish an Isle of Wight Infrastructure expansion fund to assist companies coming forward with suitable investment which will create badly needed jobs on the Isle of Wight. The scheme will combine with other schemes to provide a comprehensive package to support the growth of the key strategic Solent industries of marine, aerospace, renewable energy and advanced manufacturing on the Isle of Wight.
Itchen Riverside	In order for Southampton to remain a viable and prospering City, the increasing risk of tidal flooding must be managed and reduced in a strategic, co-ordinated and sustainable manner. There are currently 848 residential properties and 509 commercial properties at threat from a 1:200 year (0.5% AEP) event. One of the priority schemes within the Southampton Coastal Strategy (2012) is implementation of an interim height floodwall from Mount Pleasant Industrial Estate to Ocean Village to provide protection up to 2060, combined with land raising on those areas available for redevelopment (Former Meridian Studios and Town Depot).
Cross-Solent Ferry Interchanges	Provide new ferry terminal interchange facilities in Southampton and Isle of Wight to facilitate major regeneration schemes at Royal Pier Waterfront and East Cowes.

Connectivity and Enabling Economic Growth

We are not seeking funding for the following three transport interventions through the Local Growth Deal. Instead we are seeking freedoms and flexibilities. In respect of M3 Junction 9, we are asking for the Highways Agency to identify a comprehensive solution to the current and forecast capacity constraints at this junction. Following this, we ask for funding to be committed to this solution by the Highway Agency for delivery within the period 2015-20. Improved capacity and operation at M3 Junction 9 will support growth at the Port of Southampton.

In recognition of the inter-linkages between the M27 and railway network in providing for Portsmouth to Southampton connectivity, we are seeking a duty to cooperate for the Highways Agency and Network Rail with the Solent LEP and the LTAs of the LEP area to bring forward and align investment to support our growth ambitions. This will include:

- For the Highway Agency to commence work on identifying the options for managed motorways and consideration of their business case and deliverability as set out on page 75 of "Investing in Britain's Future"
- Following this, for the Highways Agency to commence the delivery of a phased programme of managed motorways interventions on the M27 and southern sections of the M3 from mid-2015.
- To consider options for better Portsmouth to Southampton rail connectivity (in terms of journey time, frequency, and routing options) and improvements in journey time between the Solent and London.

Improved Portsmouth to Southampton connectivity through managed motorways and better rail connectivity will:

- Strengthen access to the Port of Portsmouth ahead of QE Class carrier arrivals
- Improve access to Southampton International Airport to help it play a greater role in supporting the UK aviation offer and in attracting inward investment to the Solent
- unlock key strategic development sites
- accommodate the aggregate impact of new development across the Solent
- accommodate forecast growth in traffic

Developing a Pipeline of Transport Capital Infrastructure Projects

In accordance with the Local Growth Deal Guidance and our determination to realise early economic growth through the Local Growth Deal, our proposals focus on unlocking and accelerating, in the early years of the Plan period, those key development opportunities that are ready to go (Welborne and North Whiteley) and that are in train (Solent Enterprise Zone).

However, we have a further pipeline of strategic development sites that will require capital investment in transport infrastructure to realise their potential and unlock private sector leverage, new jobs, new housing and new employment floor space. There will be an on-going requirement to support our three International Gateways at the Port of Southampton, Port of Portsmouth (including the Commercial Port and Naval Dockyard), and Southampton International Airport and its adjacent strategic development sites at the former Ford manufacturing plant and Eastleigh Riverside. These three International Gateways and the two large cities will experience significant change going forward. This could be driven by growth opportunities linked to potential land release at Marchwood Military Port, the ambition to unlock further development around Royal Pier, the Ford / Southampton International Airport / Eastleigh Riverside South Hub, and the arrival of the new QE Class Aircraft Carriers in Portsmouth from 2017. Alongside this, there is the continuing need to support infrastructure on the Isle of Wight, particularly in key areas of economic activity such as in Newport.

On this basis, we have outlined an indicative pipeline of projects below and a forecast of funding requirements. Through our annual business processes we will bring forward advanced business cases to support these funding asks as part of the Local Growth Deal process, commencing later this year.

In consideration of this, we would like to make clear that funding will be required through future LGF negotiations for pipeline schemes from 2017-18 onwards to enable the continued growth of our three International Gateways and in our two cities, and to unlock opportunities in the latter part of the Plan period. To cover the totality of these pipeline projects an indicative figure of around £200m has been identified to be required from the Local Growth Fund from 2017-18 onwards, given that government has made clear that all major scheme transport funding will form part of the £2bn p.a. Local Growth Fund moving forward.

Transport Priority Area	Indicative Programme Cost	Total	Anticipated Contribution (known)	Local (where)	Expected Local Growth Deal Funding Ask
Access to International Gateway at the Port of Southampton and Southampton City Centre ⁵	£75.0m		£unknown		<£75.0m
Marchwood Military Port Access	£Unknown		£Unknown		£Unknown

⁵ To be identified through a strategic access study for Southampton.

Access to International Gateway at the Port of Portsmouth (Dockyard and Commercial Port) and Portsmouth City Centre	£45.0m	>£ 4.0m	<£40.0m
Access to International Gateway at Southampton International Airport and adjacent strategic development opportunities at the former Ford site and Eastleigh Riverside South	£50.0m - £80.0m	£unknown	<£50.0m - £80.0m
Access to Newport, Isle of Wight	£20.0m	£ 4.0m	£ 6.0m
Total	£190.0m - £210.0m	>£ 8.0m	<£171.0m - £201.0m

Solent Local Transport Body Identified Schemes

The following schemes were prioritised by the Solent LTB, and fit within the £19.2m funding envelope that has been confirmed.

Scheme Name	Estimated Cost (£m)	Local Contributions (£m)		Scheme Summary
		Private Sector	Public Sector	
Dunsbury Hill Farm Link Road	£ 8.54	-	£ 4.00	Provide new access road through proposed to unlock strategic employment site.
Station Quarter North, Southampton	£ 7.87	-	£ 3.68	Key interchange improvements to this important transport gateway to increase accessibility and release land for regeneration in the city centre.
The Hard Interchange, Portsmouth	£ 6.83	-	£ 2.00	Key interchange improvements to this important transport gateway to increase accessibility to the city centre and supporting city centre regeneration.
A27 Improvement Scheme	£ 6.61	£ 0.04	£ 1.62	The scheme comprises improvements to two critical junctions on the A27 in central Fareham and the connecting carriageway links and will relieve congestion in an area that will see significant new development.
Solent Transport Fund	£10.00	£1.00	£4.00	A range of sustainable transport interventions and network enhancements to support future economic growth and to retain the existing productivity of the Solent LEP area through the provision of resilient, efficient, safe, accessible and well maintained transport networks. Potential interventions include: <ul style="list-style-type: none"> • City and town centre accessibility improvements by all modes;

- Resilience and network enhancement measures on key corridors to improve accessibility and tackle congestion
- Strategic Cycle Network
- Technology, Innovation, Behavioural Change and Safety Improvements
- Park & Ride
- Access to Stations



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Portsmouth
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