

# Regional Evidence Base

## Part 1

### Story of Place



## 2.0 Challenges

### Introduction

- 2.1 At the outset of preparing the Western Gateway Regional Evidence Base (REB) officers were tasked with identifying known transport challenges for the Gateway area. These challenges were subsequently presented and discussed with stakeholders through the Western Gateway Transport and Business Forum and presented to the Western Gateway Board to ensure these issues were understood and agreed from the outset of the process.

### Summary of travel challenges identified by local authority officers

- 2.2 Five primary challenges were identified including:

- **Improving metro connectivity**- As the employment offer increases within the two city regions (West of England and Bournemouth, Christchurch and Poole) there will be increased need to travel from the surrounding rural hinterland. Servicing local connectivity is vitally important for business to business, employees to employers and leisure trips. This will include the opening up of passenger transport routes, increasing service frequencies and ensuring new communities have access to a full range of travel choices by delivering:

- MetroBus network within the West of England area;
- Extending MetroWest rail services from the West of England area to Gloucester & Westbury; and
- Improving passenger transport connections in and around the Bournemouth, Christchurch and Poole (BCP) city region

By delivering real alternatives to car use within and between urban areas this will mitigate the impacts of growth by tackling congestion and improving air quality and help improve the quality of place for our communities. By understanding and addressing these challenges as part of a future Strategic Transport Plan the expected outcomes include:

- Multi-modal travel that unlocks the wider economic benefits associated with improved access and increased economic activity;
  - Minimised increase in car based travel demand derived from the scale of planned growth; and
  - The move to a low carbon transport network resulting in less journey delay and improved air quality.
- **Improving network resilience** - Resilience in this context is broadly described in terms of journey time reliability and the ability to manage existing demand and future growth. A lack of resilience within a transport network results in a failing transport network with poor journey times and is harmful impacts on productivity, economic growth and local business activity. By understanding and addressing these challenges as part of a future Strategic Transport Plan the expected outcomes include:

- A transport network resilient to extreme events;
  - Increased journey time reliability; and
  - The smart operation and management of the transport network through increased use of technology and live travel information.
- **Improving strategic connectivity** - The Western Gateway area is a crossroads of national connectivity. Strategic transport interventions play a fundamental role in driving economic growth. They facilitate the development of housing and employment space; improve connectivity between business and skilled people and improve connectivity between businesses. Improved connectivity will improve productivity by maintaining and enhancing external transport linkages through a number of strategic corridors.
    - Midlands to the South West Peninsula;
    - South Coast to the West of England;
    - London and the South East to South Wales;
    - South East to South West; and
    - Oxfordshire to South Wales.

To inform the Strategic Transport Plan 15 strategic travel corridors have been identified. Each corridor will have its own multi-modal corridor study to understand its existing and potential role within a Sub-national context enhancing strategic connectivity.

- **Improving access to Bristol Airport** - Bristol Airport is the largest airport in the South West and one of the top 10 largest UK airports. It primarily serves a mixture of UK and European destinations on both a scheduled and chartered basis. It is increasing its non-European destinations including North America and the Middle East. The airport has planning consent to handle up to 10m passengers a year. This is likely to be reached in the early 2020s. Future growth is supported by the designation of a strategic employment zone.

Connectivity is a major issue for the airport. It has no direct access onto the motorway network and is served by the single-carriageway A38. There is also no direct rail access. This lack of access impacts negatively on the reputation of the airport and increases passenger leakage to alternative airports outside the Gateway area (Birmingham and the South East airports). By understanding and addressing these challenges as part of a future Strategic Transport Plan the expected outcomes include:

- Improved access arrangements to Sub-national transport networks;
  - Enabling Bristol Airport to fulfil its potential and become a leading national airport; and
  - Improved business connectivity with international markets.
- **Improving access to Bournemouth Airport (and Aviation Business Park), the Port of Poole and Portland Port** - There are no motorway connections to the south coast ports located within the Gateway area and the existing strategic road network connection experiences resilience issues. Significant growth is planned for all three gateways, with

the Port of Poole recently opening its new £10m South Quay cruise berth, significantly increasing its capacity for conventional cargoes and cruise ships. Portland Port's annual freight volumes have increased to almost 500,000 tonnes of cargo and increasing numbers of cruise ships are visiting the port each year.

The Bournemouth International Growth programme (BIG) aims to transform accessibility to the airport and nearby Wessex Fields sites; releasing 70 hectares of employment land with the potential for creating up to 10,000 new jobs over the next decade. In alignment with the government's Industrial Strategy, it is imperative that international gateways are well connected to the market and that access is not a barrier to growth and enhanced productivity. By understanding and addressing these challenges as part of a future Strategic Transport Plan the expected outcomes include:

- Improved highway and public transport connectivity improvements linking Bournemouth Airport, the Port of Poole and Portland Port to national and sub-regional transport networks enabling growth at our international gateways.
- **Improving digital technology and innovation** - For the Western Gateway area to benefit from new technologies it will be essential to adopt a collective approach to the development and delivery of transformational technology. This recognises that technology has a major role to play in helping to address existing congestion/transport issues. The Gateway area wants to be at the forefront of global digital technology and innovation to ensure transport networks are digitally enabled and ready to meet the needs of private travel and the transition from petrol and diesel powered vehicles. This would include a range of technological improvements where the collective development would benefit from economies of scale including shared research development of:
  - A strategic approach to the installation of electric vehicle charging points;
  - The delivery of smart city technology;
  - The use of smart technologies to manage urban transport environments and assets; and
  - The potential of other emerging technologies, such as the integration of autonomous and semiautonomous vehicles onto the network.

By understanding and addressing these challenges as part of a future Strategic Transport Plan the expected outcomes would include:

- Delivery of the Government's Clean Growth Strategy;
- Investment in transport innovation with research and business sectors;
- Reduction in the risk of piecemeal delivery across the Gateway areas; and
- Improvement of highways assets, network management and user experience.

### **Challenges identified by the Western Gateway Transport and Business Forum**

- 2.3 The **Urban Mobility** challenge was fully supported, as was the ability to provide a robust multi-modal transport offer for the Gateway area. Traffic congestion at pinch points was considered a major barrier to increased productivity. Many businesses reported significant

time lost in congestion and the additional risks associated damaging the reputation of the area. When this issue was discussed there was agreement for the need to manage existing road space more effectively. There was broad agreement for balance to be struck between increasing additional capacity for cars while providing better facilities for walking/cycling/passenger transport. This would remove unnecessary local trips from the strategic routes enabling a more efficient and reliable transport network.

- 2.4 There was recognition of the importance of transport hubs and role of interchanges in urban areas, especially with improving the first and last mile walking and cycling links. Concerns were raised regarding the inconsistent quality of facilities with a preference for improvements to be delivered as a set of transformational improvements rather than very large one-off investments. The importance of attracting new passenger transport users was clear as was the need for joint ticketing options across providers and modes. This was considered important to make the customer experience less confusing.
- 2.5 The challenge of using existing road space more effectively was identified- not just increasing the capacity for cars. There was acknowledgment by all that better facilities for walking/cycling/PT would remove unnecessary local trips from the MRN/SRN enabling more efficient and reliable strategic journeys.
- 2.6 The importance of **Strategic Connectivity** and **Network Resilience** was highlighted by the Forum especially in relation to the freight challenge and accessing international ports. The conflict between rail passenger and rail freight service capacity was recognised and cited as a reason for the ongoing reliance on the car for strategic trips.
- 2.7 A number of highway resilience issues were identified including:
  - The impact on the local highway network following any accidents on the M4/M5;
  - The safety issue of mainline queuing on the motorway at several junctions on the M4/M5 during peak travel times;
  - Constrained urban networks within the historic centres of Bath, Cheltenham and Salisbury;
  - Limited capacity on strategically important routes including A350, A36 and A37; and
  - Poor connectivity and delays are reportedly pushing tourists to different destinations.
- 2.8 A number of rail issues were identified including:
  - The frequency of services, quality of rolling stock, signalling, and the need to increase capacity. There are major issues with the GWR route linking Gloucester to the south coast. There are also capacity issues for Cross-Country services, which are also affected by uncertainty around the franchise;
  - Councils have local station aspirations which will conflict with longer distance service requirements;
  - As an area there is a rail challenge – it is important to decide what is more important; quicker journey times between major centres or greater connectivity for rural areas and/or smaller local centres to the major centres. A balance is required in order to look attractive to the wider audience and encourage increased passenger numbers;

- There is a need for better use of existing freight paths as increased pressure from passenger growth plans (such as MetroWest) continues;
- Rail resilience is impacted by capacity constraints at Bristol East and Westerleigh junctions, as well as between Swindon and Didcot. These issues cause impacts from the far south west and Birmingham; and
- The Strategic Transport Plan is a chance to better integrate rail into land use and spatial planning.

2.9 A number of freight issues were identified including:

- The need for better understanding of HGV movements from freight companies and key corridors of demand;
- The need for improved links to ports and airports to improve international connectivity, this needs to be addressed in partnership with neighbouring STBs and Wales;
- Rail Freight – opportunities for loading gauge improvements for greater capacity for container traffic; and
- Road improvements should link to new/improved rail interchanges – rail freight needs good road access.

2.10 The need for improved access to **Bristol Airport** was highlighted by the forum. There was broad acceptance that despite a climate emergency being declared by many local authorities, this is not anticipated to halt the demand for air travel. It was considered a priority to maximise sustainable access to airports. Other access issues included:

- Poor connectivity to Bristol Airport is constraining growth and making it difficult to attract and retain staff;
- Lack of connections to the Airport from the South West Peninsula prohibits access international markets; and
- Lack of motorway and rail connections to Bristol Airport – leading to leakage to other airports with better access. Anecdotally, many people live geographically closer to Bristol but choose to travel to London airports.

2.11 While recognising the importance of **digital technology** in driving future transport networks views provided through the forum were limited to improving digital connectivity on trains and buses.

2.12 Other challenges that stakeholders wanted to raise were in relation to land-use planning and the need to ensure development takes place in locations that can provide a range of transport options to reduce reliance on the car. There was also broad consensus that despite the critical need to reduce carbon emissions there is still a responsibility to plan for growth and in some cases additional road capacity will be required. Air quality was raised and the need to facilitate electric vehicle infrastructure.

2.13 Enabling access to jobs especially for the young, lower paid and apprentices (flow of labour and skills) was a key issue for the Chamber of Commerce. The need for greater modal choice to enable individuals to travel is inescapably linked to the wider performance of the

economy. Rural public transport connectivity was raised as a challenge to accessing employment areas.

### **Summary of Challenges**

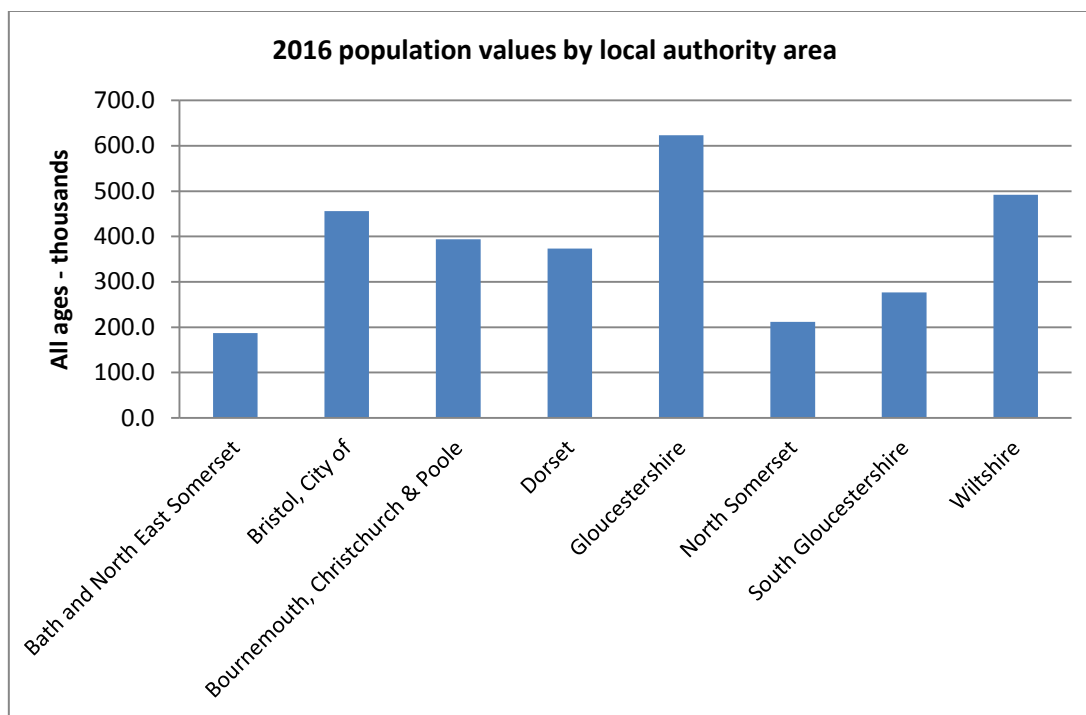
The challenges identified by both officers and stakeholders attending the Transport and Business Forum identified included:

- Resilience on the highway network;
- Importance of improving North-South connectivity;
- Managing urban travel movements and the need to provide multimodal travel options;
- Improving rail frequency of services, quality of rolling stock and need for increased capacity; and
- Connectivity to Bristol Airport including multi modal access.

### 3.0 Population

- 3.1 Using Office of National Statistics<sup>1</sup> (ONS) subnational population projections from 2016 the Western Gateway's resident population is 3,013,800. **Figure 3.1** illustrates the distribution of this population by local authority across the Gateway area.

**Figure 3.1 – Population by local authority area**



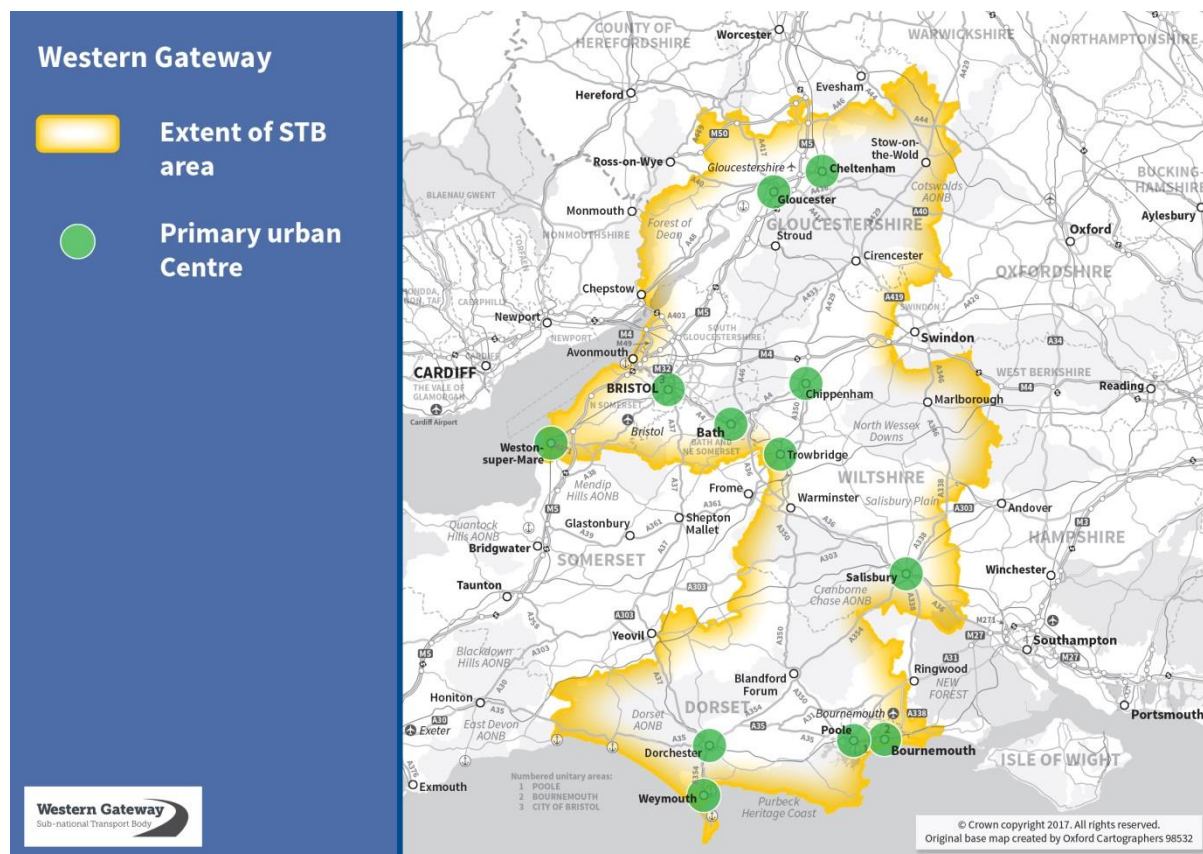
- 3.2 The primary urban settlements within the Gateway Area are located in three geographic bands. **Figure 3.2** illustrates the location of these centres. Cheltenham and Gloucester form the northern band bordering the Midlands; Bath, Bristol, Chippenham, Salisbury, Trowbridge and Weston-Super-Mare form the central band; and Bournemouth, Ferndown (on periphery of BCP), Poole Dorchester, Weymouth & Portland form the southern band.
- 3.3 ONS population forecasts indicate the population of the Western Gateway area is set to increase by an additional 448,000 people by 2041. **Figure 3.3** illustrates the projected rate of population growth within the Western Gateway (15%) area compared to England (12%). The higher rate of growth recorded within the Gateway area demonstrates the desirability of the area as a location to live.
- 3.4 Population growth is not forecast to take place at the same rate across the Western Gateway area. **Figure 3.4** illustrates the rate of projected population growth by Local Authority area. Population growth between 2016 and 2041 is projected to be highest in Bristol (21%), South Gloucestershire (21%) and North Somerset (19%). This scale of growth is well above the average rate of growth for the Western gateway area. Gloucestershire and

<sup>1</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2>

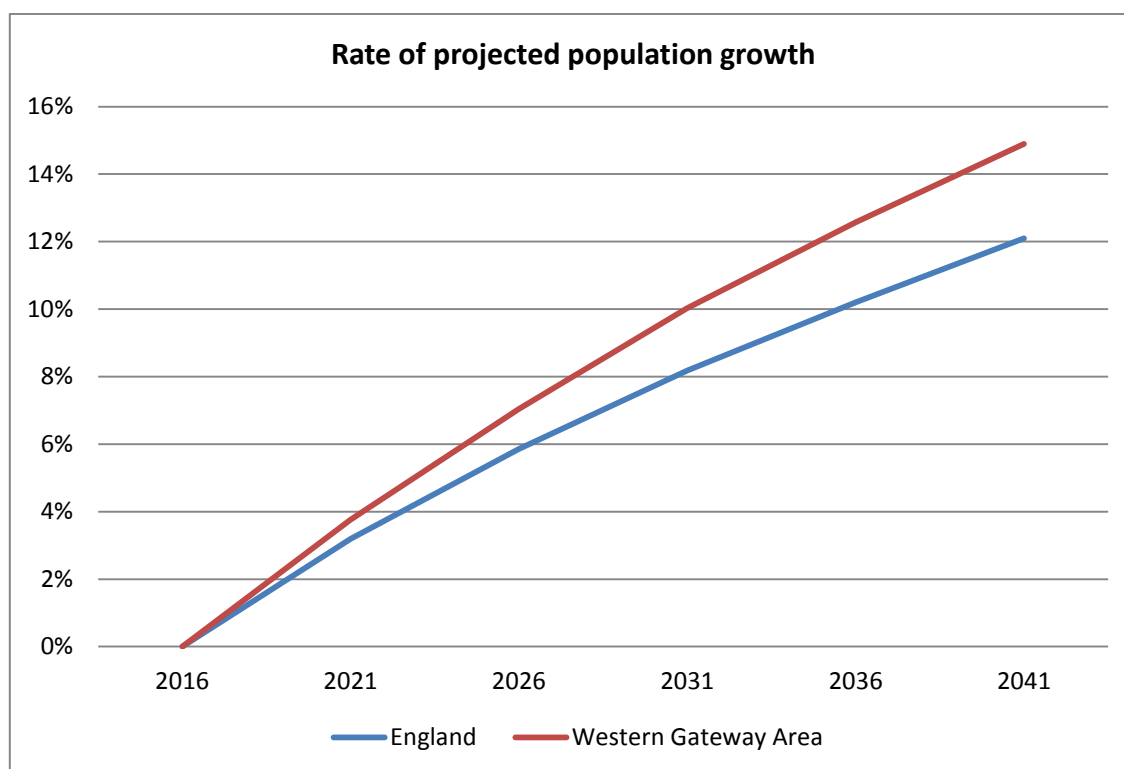


Bath and North East Somerset are projecting average growth rates consistent with the average for the Gateway area as a whole (15%). Wiltshire and Bournemouth, Christchurch and Poole are projected growth rates consistent with England (12%). Dorset (8%) is the only area where population growth is less than the average for England.

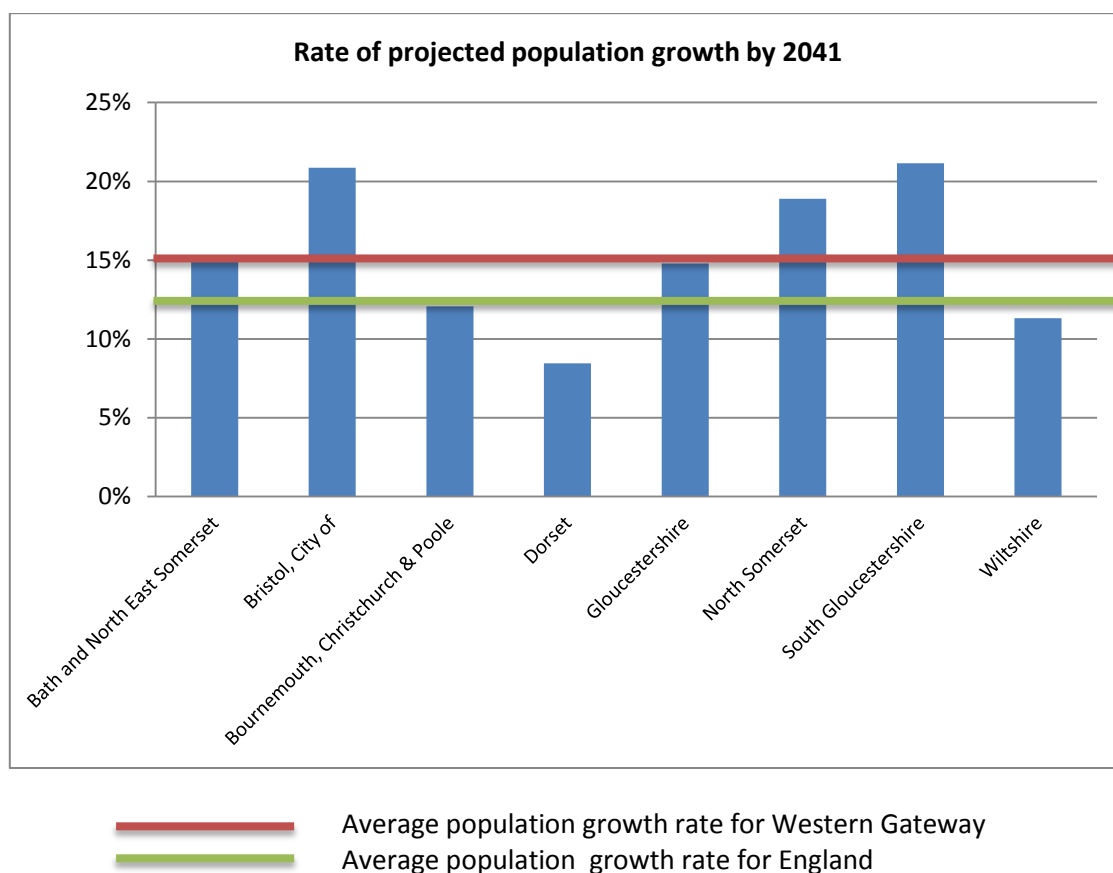
**Figure 3.2 – Primary urban centres within Western Gateway area**



**Figure 3.3 – Rate of projected population growth**

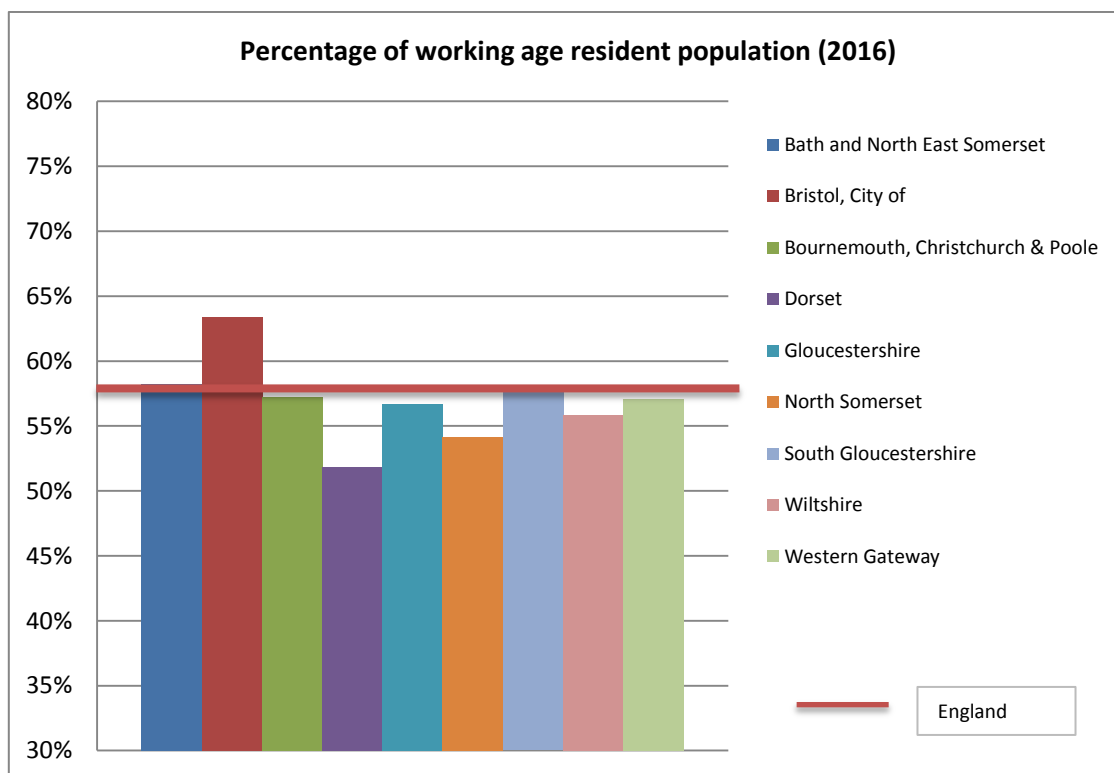


**Figure 3.4 – Rate of projected population growth from 2016 to 2041 by Local Authority area**



- 3.5 Using ONS subnational population projections from 2016, the Western Gateway’s working age population is 1,720,000. This represents 57% of the resident population and is consistent with the national average for England (58%). This is based on the age bands 20 to 64 as a proxy for the working age population. **Figure 3.5** illustrates the percentage of working age resident population in 2016. The percentage of working age population by resident population varies across the Western Gateway area. Bristol (63%) records the highest percentage and Dorset (52%) the lowest.

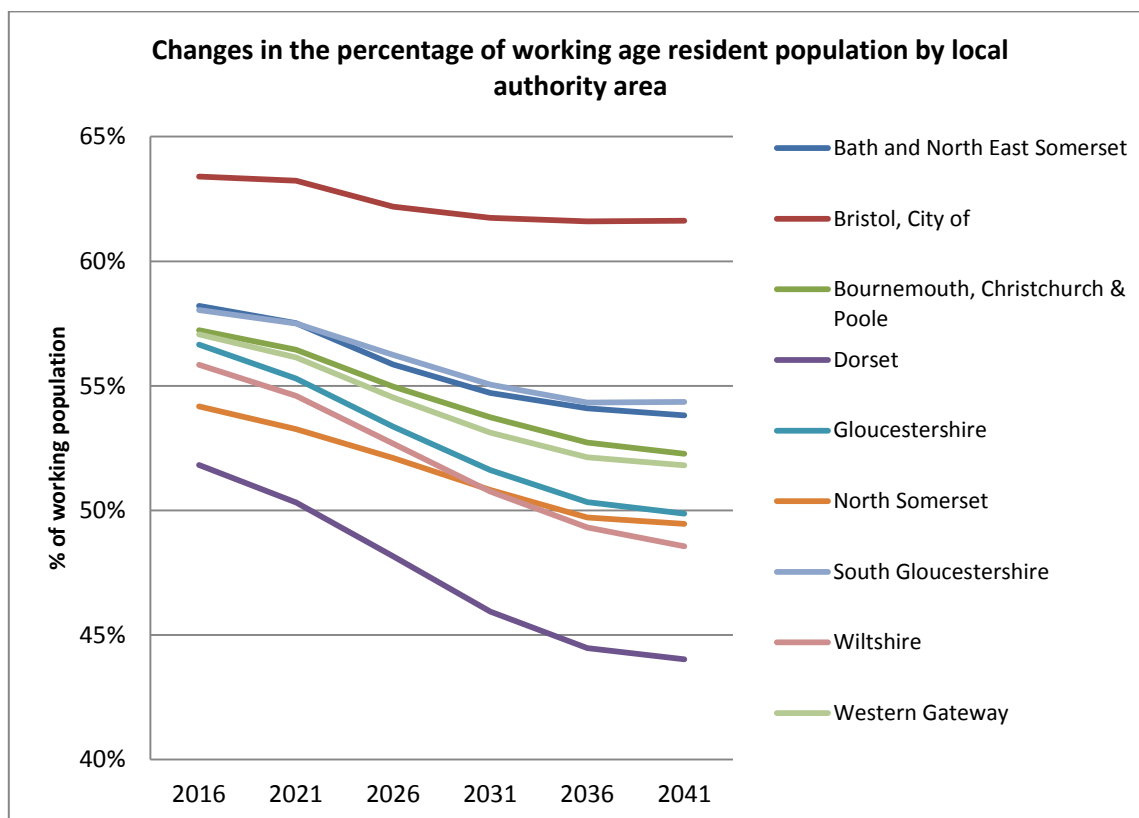
**Figure 3.5 – Rate of projected population growth from 2016 to 2041 by Local Authority area**



- 3.6 Despite the forecast of an addition 448,000 people living in the Western Gateway area by 2041, only 74,000 is anticipated to be of working age. This has a negative impact on the percentage of working age population by resident population. It reduces the overall percentage of working age population in the Western Gateway area to 52% by 2041.
- 3.7 The 5% percentage point change reduction in is inline with national trends for England. Again, this change is not consistent across the Western Gateway area. Those areas recording the fewest percentage point reduction include Bristol (-2%), Bath and North East Somerset (-4%) and North Somerset (-4%). Those areas recording the greatest percentage point reduction are the larger Shire counties including Dorset (-8%), Gloucestershire (-7%) and Wiltshire (-7%). **Figure 3.6** illustrates the changes to the percentage of projected working age from 2016 to 2041 by Local Authority area. The challenge for the Western Gateway is the need for better connectivity to attract workers and attract businesses that offer employment opportunities.

- 3.8 Attracting and retaining businesses within the Western Gateway area is of paramount importance to ensure the number of working age people increases. Transport has a role in this and improving regional connectivity will be vitally important.

**Figure 3.6 – Changes to the percentage of projected working age from 2016 to 2041 by Local Authority area**



### Population Summary

- The rate of population growth forecast to 2041 is higher within the Western Gateway area when compared to England as a whole;
- Areas forecast to have the highest levels of population growth include Bristol and surrounding areas;
- The proportion of working age population by resident population in the Western Gateway area is consistent with that of England as a whole; and
- Attracting and retaining businesses within the Western Gateway area through better connectivity is essential to ensure sustainable economic growth.

## 4.0 Connectivity

- 4.1 Connectivity impacts productivity through improved access to better employment opportunities, better job matching, agglomeration (cost savings from businesses locating close to one another) and induced investment (output changes in imperfectly competitive markets).
- 4.2 **Figure 4.1** and **Figure 4.2** document average travel times between each centre by road and rail. In addition, travel times to four major UK centres outside the Gateway area have been included to understand national connectivity. Using journey time information accessed from Google Maps, an assessment of accessibility has been undertaken based on a typical weekday journey time when arriving at a destination by 10am.
- 4.3 Bristol, Bath and Chippenham are the most accessible urban centres within the Western Gateway area. This is unsurprising in terms of their central location and the benefits provided by the M4 and M5 and main line rail network. However, it should be noted that if the assessment had been made during peak travel times the level of congestion impacting Bristol and Bath would have negatively impacted their level of accessibility. If congestion is not managed in urban centres it will negatively impact Sub-national connectivity.
- 4.4 Access to London from the primary urban centres by road is typically between 2 hours 10 minutes and 2 hours 50 minutes. Access by rail varies considerably with travel times typically 1 hour 18 minutes to over 3 hours. Chippenham on the Great Western Main Line provides the quickest travel times, with Weymouth and Dorchester the slowest as they are located at the end of the South Western Main Line.
- 4.5 Access to Birmingham by road and rail varies considerably. Travel times from Cheltenham are 1 hour 10 minutes by road and 45 minutes by rail. Conversely travel times from Dorchester on the south coast are 3 hours 10 by road and 4 hours 25 minutes by rail. This highlights the issue of north/south connectivity with the Gateway area between two centres that are 125 miles apart.
- 4.6 Access to Cardiff by road is typically between 50 minutes to 2 hours 20 minutes, by rail there is a greater variance and is typically 50 minutes to 4 hours 25 minutes. Bristol is most accessible via the M4 and Great Western Main Line. Dorchester is the least accessible being located on the south coast with limited northbound connections.
- 4.7 Access to Manchester by road and rail varies considerably. Travel times from Cheltenham are 2 hours 40 minutes and 2 hours 18 minutes by road and rail respectively. Conversely travel times from Dorchester and Poole on the south coast are 4 hours 20 minutes by road and not possible by rail if travelling on the same day and wanting to arrive by 10am.
- 4.8 The disparity in journey times especially to Birmingham and Manchester highlight the connectivity gaps currently experienced by destinations on the south coast. Distance is a clear factor in this, but improving north-south connectivity will be a key factor in closing current 'productivity gaps' both within the Western Gateway area and to destinations in the Midlands and North of England.

**Figure 4.1 – Typical weekday travel time by road to arrive by 10am**

	Bath	Bournemouth	Bristol	Cheltenham	Chippenham	Dorchester	Gloucester	Poole	Salisbury	Trowbridge	Weston-Super-Mare	Weymouth & Portland	London	Birmingham	Cardiff	Manchester
Bath		1h 40 min	0h 45 min	1h 05 min	0h 40 min	1h 40 min	1h 00 min	1h 30 min	1h 05 min	0h 30 min	1h 00 min	1h 40 min	2h 30 min	2h 30 min	1h 10 min	4h 00 min
Bournemouth	1h 40 min		2h 10 min	2h 20 min	1h 50 min	0h 45 min	2h 20 min	0h 18 min	0h 40 min	1h 30 min	2h 10 min	0h 50 min	2h 10 min	2h 50 min	2h 40 min	4h 10 min
Bristol	0h 45 min	2h 10 min		0h 45 min	0h 30 min	1h 40 min	0h 45 min	2h 10 min	1h 30 min	0h 50 min	0h 40 min	2h 20 min	2h 20 min	1h 40 min	0h 50 min	3h 10 min
Cheltenham	1h 05 min	2h 20 min	0h 45 min		1h 00 min	2h 10 min	0h 20 min	2h 20 min	1h 40 min	1h 15 min	1h 05 min	2h 50 min	2h 20 min	1h 10 min	1h 10 min	2h 40 min
Chippenham	0h 40 min	1h 50 min	0h 30 min	1h 00 min		3h 33 min	0h 55 min	1h 40 min	1h 05 min	0h 30 min	0h 55 min	1h 50 min	2h 20 min	1h 50 min	1h 05 min	3h 20 min
Dorchester	1h 40 min	0h 45 min	1h 40 min	2h 10 min	3h 33 min		2h 10 min	0h 30 min	0h 55 min	1h 20 min	1h 25 min	0h 15 min	2h 30 min	3h 10 min	2h 20 min	4h 20 min
Gloucester	1h 0 min	2h 20 min	0h 45 min	0h 20 min	0h 55 min	2h 10 min		2h 20 min	1h 50 min	1h 10 min	1h 10 min	2h 20 min	2h 30 min	1h 15 min	1h 05 min	2h 40 min
Poole	1h 30 min	0h 18 min	2h 10 min	2h 20 min	1h 40 min	0h 30 min	2h 20 min		0h 55 min	1h 20 min	2h 15 min	0h 40 min	2h 20 min	3h 20 min	2h 30 min	4h 20 min
Salisbury	1h 05 min	0h 40 min	1h 30 min	1h 40 min	1h 05 min	0h 55 min	1h 50 min	0h 55 min		0h 55 min	1h 40 min	1h 05 min	2h 10 min	2h 30 min	2h 00 min	3h 50 min
Trowbridge	0h 30 min	1h 30 min	0h 50 min	1h 15 min	0h 30 min	1h 20 min	1h 10 min	1h 20 min	0h 55 min		1h 10 min	1h 30 min	2h 30 min	2h 10 min	1h 20 min	3h 30 min
Weston-Super-Mare	1h 00 min	2h 10 min	0h 40 min	2h 50 min	0h 55 min	1h 25 min	1h 10 min	2h 15 min	1h 40 min	1h 10 min		1h 40 min	2h 40 min	2h 20 min	1h 00 min	3h 20 min
Weymouth & Portland	1h 40 min	0h 50 min	2h 20 min	1h 05 min	1h 50 min	0h 15 min	2h 20 min	0h 40 min	1h 05 min	1h 30 min	1h 40 min		2h 50 min	3h 10 min	2h 20 min	4h 30 min
London	2h 30 min	2h 10 min	2h 20 min	2h 20 min	2h 20 min	2h 30 mins	2h 30 min	2h 20 min	2h 10 min	2h 30 min	2h 40 min	2h 50 min				
Birmingham	2h 30 min	2h 50 min	1h 40 min	1h 10 min	1h 50 min	3h 10 min	1h 15 min	3h 20 min	2h 30 min	2h 10 min	2h 20 min	3h 10 min				
Cardiff	1h 10 min	2h 40 min	0h 50 min	1h 10 min	1h 05 min	2h 20 min	1h 05 min	2h 30 min	2h 00 min	1h 20 min	1h 00 min	2h 20 min				
Manchester	4h 00 min	4h 10 min	3h 10 min	2h 40 min	3h 20 min	4h 20 min	2h 40 min	4h 20 min	3h 50 min	3h 30 min	3h 20 min	4h 30 min				

**Figure 4.2 – Typical weekday travel time by rail to arrive by 10am**

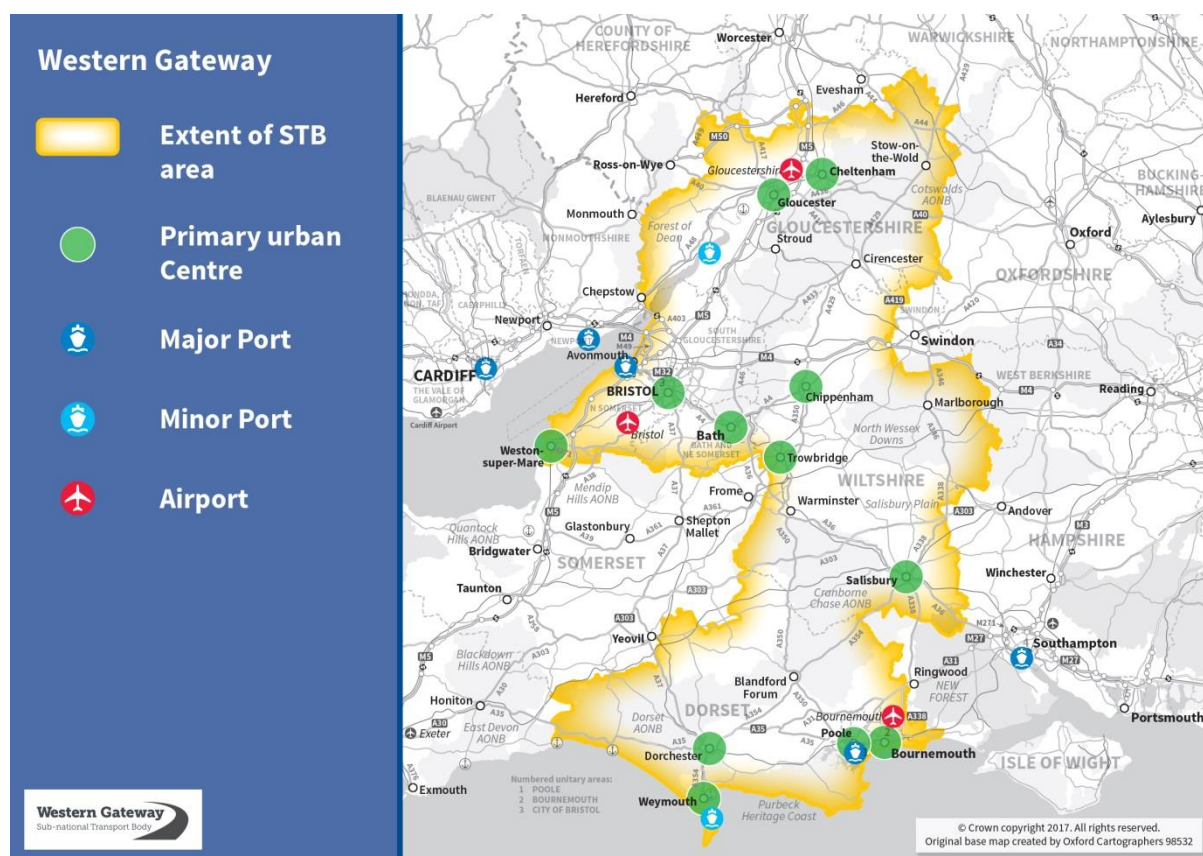
	Bath	Bournemouth	Bristol	Cheltenham	Chippenham	Dorchester	Gloucester	Poole	Salisbury	Trowbridge	Weston-Super-Mare	Weymouth & Portland	London	Birmingham	Cardiff	Manchester
Bath		2h 20 min	0h 15 min	1h 10 min	0h 11 min	2h 05 min	1h 25 min	3h 04 min	0h 55 min	0h 18 min	0h 50 min	2h 20 min	1h 30 min	1h 57 min	1h 20 min	3h 30 min
Bournemouth	2h 20 min		2h 55 min	3h 10 min	2h 47 min	0h 45 min	3h 36 min	0h 12 min	1h 16 min	2h 15 min	3h 30 min	0h 58 min	1h 54 min	3h 19 min	3h 19 min	5h 25 min
Bristol	0h 15 min	2h 55 min		0h 40 min	0h 24 min	2h 25 min	0h 55 min	3h 15 min	1h 09 min	0h 35 min	0h 30 min	2h 39 min	1h 43 min	1h 26 min	0h 50 min	2hr 59 min
Cheltenham	1h 10 min	3h 10 min	0h 40 min		1h 30 min	-	0h 09 min	4h 03 min	2h 09 min	1h 29 min	1h 35 min	3h 35 min	2h 03 min	0h 45 min	1h 18 min	2h 18 min
Chippenham	0h 11 min	2h 47 min	0h 24 min	1h 30 min		1h 40 min	1h 30 min	2h 58 min	1h 15 min	0h 25 min	0h 06 min	2h 58 min	1h 18 min	2h 13 min	1h 25 min	4h 03 min
Dorchester	2h 05 min	0h 45 min	2h 25 min	-	1h 40 min		3h 49 min	0h 33 min	2h 13 min	1h 26 min	2h 30 min	0h 11 min	3h 14 min	-	4h 09 min	-
Gloucester	1h 25 min	3h 36 min	0h 55 min	0h 09 min	1h 30 min	3h 49 min		3h 47 min	2h 30 min	1h 40 min	1h 42 min	3h 28 min	1h 51 min	0h 56 min	1h 04 min	2h 37 min
Poole	3h 04 min	0h 12 min	3h 15 min	4h 03 min	2h 58 min	0h 33 min	3h 47 min		1h 44 min	2h 35 min	3h 41 min	0h 44 min	2h 14 min	3h 41 min	3h 41 min	-
Salisbury	0h 55 min	1h 16 min	1h 09 min	2h 09 min	1h 15 min	2h 13 min	2h 30 min	1h 44 min		0h 41 min	2h 04 min	2h 33 min	1h 35 min	2h 46 min	2h 23 min	4h 15 min
Trowbridge	0h 18 min	2h 15 min	0h 35 min	1h 29 min	0h 25 min	1h 26 min	1h 40 min	2h 35 min	0h 41 min		1h 23 min	1h 57 min	1h 58 min	2h 35 min	1h 42 min	3h 55 min
Weston-Super-Mare	0h 50 min	3h 24 min	0h 30 min	1h 35 min	0h 06 min	2h 30 min	1h 42 min	3h 41 min	2h 04 min	1h 23 min		3h 19 min	2h 20 min	2h 09 min	1h 35 min	3h 39 min
Weymouth & Portland	2h 20 min	0h 58 min	2h 39 min	3h 35 min	2h 58 min	0h 11 min	3h 28 min	0h 44 min	2h 33 min	1h 57 min	3h 19 min		3h 03 min	4h 25 min	3h 50 min	-
London	1h 30 min	1h 54 min	1h 43 min	2h 03 min	1h 18 min	3h 14 min	1h 51 min	2h 14 min	1h 35 min	1h 58 min	2h 20 min	3h 03 min				
Birmingham	1h 57 min	3h 19 min	1h 26 min	0h 45 min	2h 13 min	-	0h 56 min	3h 41 min	2h 46 min	2h 35 min	2h 09 min	4h 25 min				
Cardiff	1h 20 min	3h 19 min	0h 50 min	1h 18 min	1h 25 min	4h 09 min	1h 04 min	3h 41 min	2h 23 min	1h 42 min	1h 35 min	3h 50 min				
Manchester	3h 30 min	5h 25 min	2hr 59 min	2h 18 min	4h 03 min	-	2h 37 min	-	4h 15 min	3h 55 min	3h 39 min	-				



## International Gateways

4.9 **Figure 4.3** illustrates the location of the Western Gateway's international ports. The three airports are distributed across the gateway area, but vary in size in terms of passenger numbers and the number of destinations served. Due to the close proximity of larger airports and the relative ease of access there is passenger leakage to Birmingham International and the South East airports. Bristol and Bournemouth airports do not handle air freight, but they do provide access to international business services including finance, high tech, professional services. The nearest airports handling air freight include: London Heathrow, Birmingham International and East Midlands International. The sea ports are located on the South Coast and Bristol Channel, as with airports these vary in size in terms of tonnes handled.

**Figure 4.3 - Location of international ports within the Western Gateway**



## Passenger Airports

4.10 Bristol Airport carries approximately 8.4m<sup>2</sup> passengers per year. It is the ninth busiest UK airport and the largest in South West England. Over 100 different destinations are served on a scheduled and chartered basis, primarily across Europe and the UK but also the Middle East and North America. The airport has planning consent to handle up to 10m passengers a year and is looking to further expand to handle 12m passengers per year. The long term vision is to grow the airport so it can handle up to 20m passengers per year and reduce use

<sup>2</sup> <https://www.caa.co.uk/Data-and-analysis/UK-aviation-market/Airports/Datasets/UK-Airport-data/Airport-data-2018-06/>



of airports in the south east. Future growth surrounding the airport is supported by its designation as a strategic employment location. Connectivity is a major issue for the airport. It has no direct access onto the motorway network and is served by the single-carriageway A38. There is also no direct rail access. This lack of access impacts negatively on the reputation of the airport and represents a potential brake on growth.

- 4.11 Bournemouth Airport carries approximately 700,000 passengers per year. Flights from the airport link 22 international destinations. There is ongoing support for further development of the airport through the Bournemouth International Growth programme (BIG). BIG aims to transform accessibility to the airport and nearby Wessex Fields sites. This is as part of a £50m investment package in the local road network provided by the Local Growth Fund. Linked to this investment is the creation of 10,000 jobs and 500 new homes. Bournemouth Airport, like Bristol, has no direct access onto the motorway or Strategic Road Network and is served by the single-carriageway B3073. There is also no direct rail access. This poor connectivity both from the surrounding areas and further afield puts it at a competitive disadvantage compared to its competitors e.g. Southampton Airport circa 30 miles to the east has its own train station and is adjacent to the intersection of the M3 and the M27 offering excellent connectivity from the north, east and west. This poor access at Bournemouth generally impacts negatively on the reputation of the airport and is a major constraint on growth.
- 4.12 Gloucestershire Airport (Staverton) no longer provides scheduled passenger flights, but is regularly used as a business aviation centre for private charter flights. There are potential growth opportunities that exist in relation to Gloucestershire Airport and the land around it, due to its close proximity to the M5 corridor. The airport has benefited from Local Growth Fund investment in new aircraft hangars which are viewed as essential to support further business growth on the site.

#### **Freight Activity at Major and Minor Ports**

- 4.13 Total tonnage levels for all UK ports remained level in 2017 compared to 2016 at 481.8 million tonnes handled. The UK continues to import more than it exports. A total of 248.3 million tonnes entered UK ports (both major and minor) from international sources, compared to 138.5 million tonnes exported.
- 4.14 There are four sea ports located within the Western Gateway area, 2 major – Bristol and Poole - and 2 minor - Sharpness and Weymouth and Portland. In 2017<sup>3</sup> ports in the Western Gateway area processed 10.5 million tonnes of goods. This represents approximately 2% of goods processed through ports in the UK. Although not located in the Western Gateway area there are a further 3 major ports located in the adjacent areas which will have an impact on the travel patterns within the Gateway area. They include Southampton, Cardiff and Newport. **Figure 4.3** illustrates the location of these ports. **Figure 4.4** illustrates the volume of tonnes handed at these ports. With the exception of Bristol, the largest port in the South West, the other ports in the Western Gateway area are dwarfed by activity

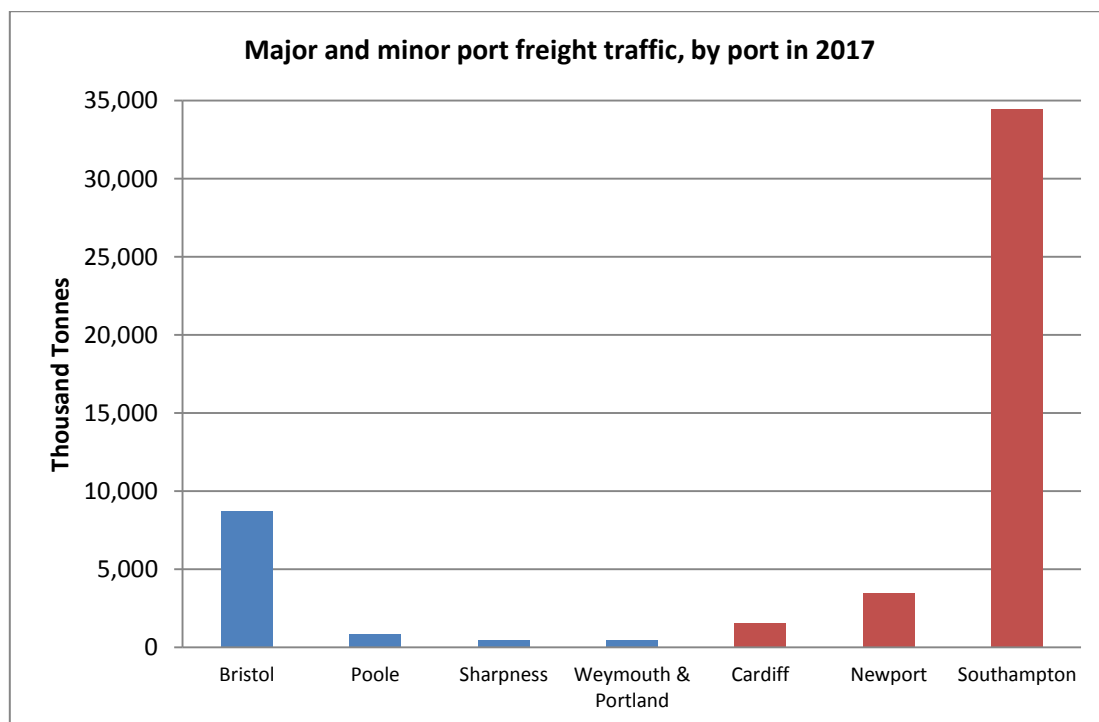
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<sup>3</sup> <https://www.gov.uk/government/statistics/port-freight-statistics-2017-final-figures>

recorded at neighbouring ports. It should be noted that Southampton is the third busiest port in the UK, behind Grimsby/Immingham and London.

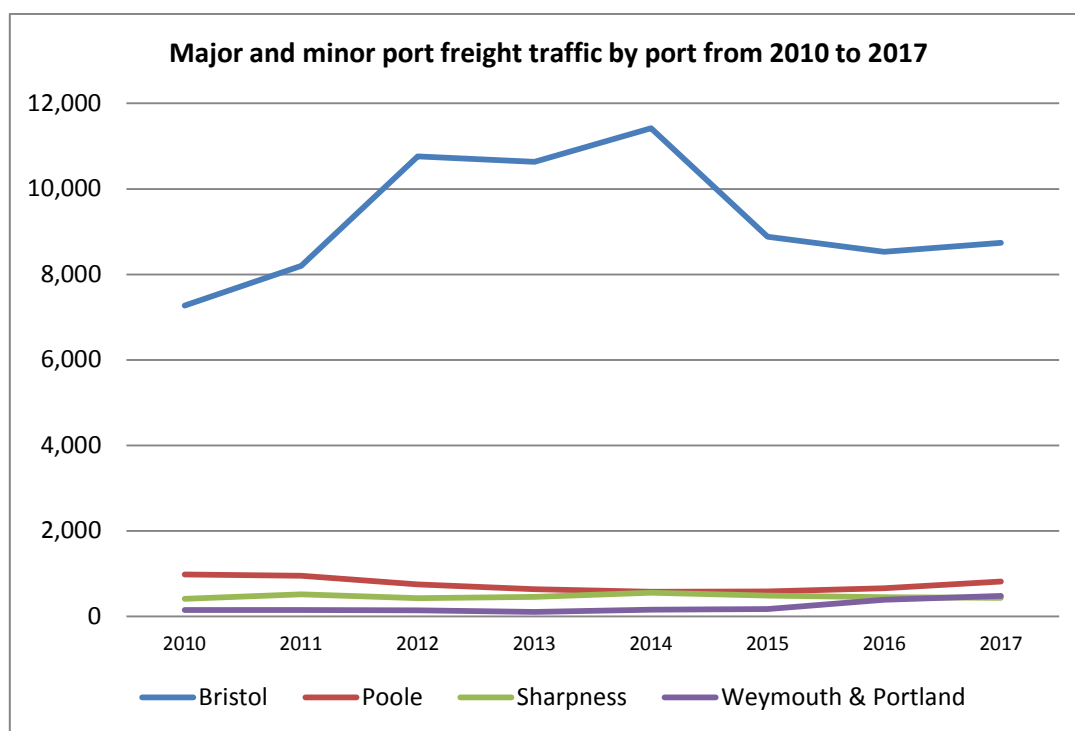
- 4.15 The principal ports in the Western Gateway area are Avonmouth Docks and Royal Portbury Dock, both of which are owned by the Bristol Port Company. They are located on the Severn Estuary and straddle the River Avon. Bristol Port is a major economic contributor to the area. It employs nearly 600 people directly and indirectly benefits over 10,000 further jobs. As well as serving the West of England and the South West, it is also extremely important for the West Midlands. Both Royal Portbury Dock and Avonmouth Docks are served by both road and rail. It is served by J18 & J19 of the M5 and is impacted by the congestion and traffic issues associated with these junctions. It is also served by the Portbury and Henbury Freight lines which are planned to be upgraded as part of MetroWest initiative. The Severn Beach line also runs to Avonmouth Dock. Goods handled by the Dock include: Containers; Bulk goods; Liquid goods; Cars. Large passenger cruise ships also depart from Royal Portbury Dock.
- 4.16 While not being in the Western Gateway, Southampton Dock is important for the area as it is considered the UK's premier international maritime gateway. It is the most productive container port and handles one fifth of the UK's trade with non-EU countries by value. The Port is less than two miles from the M27. Access from the Gateway area is via the A31 and M27 from the west and from the north via the A36. Both routes experience vehicle delays and resilience issues. Improving access from these routes within the Gateway area will not only benefit the immediate Gateway area, but also the South West Peninsula and the Midlands.

**Figure 4.4 – Volume of tonnes handled by major and minor ports**



- 4.17 The Port of Poole is home to one of the world's largest natural harbours, much of which are designated as an area of outstanding natural beauty. The port is operated by Poole Harbour Commissioners which provides a full range of freight and passenger ferry and cargo handling operations. The port shares the navigation channels with sightseeing vessels and leisure craft of all types. The commercial Port covers 60 acres and, in recent years, has expanded with the increases in continental traffic. The port also benefits from a live rail head offering rail freight connectivity.
- 4.18 Poole Harbour Commissioners maintain Poole as a prosperous, medium-sized port well in tune with its Harbour environment. The HQ of the Royal National Lifeboat Institution (RNLI) is based at the port, along with a Royal Marine base. Significant growth is planned at the port, with Borough of Poole having secured £11.7m for the Townside Access programme from Dorset LEP through the Dorset Growth Deal. The scheme will improve access to the port, town centre and to help 'unlock' development sites for regeneration. The Port recently opened its new £10m South Quay cruise berth, significantly increasing its capacity for conventional cargoes and cruise ships.
- 4.19 Sharpness Docks are located on the River Severn and is operated by the Canal & River Trust. The Canal & River Trust is the Port Authority for the impounded dock, while the quayside activities are run by Sharpness Dock Limited. The Severn Area Rescue Association (SARA) maintains a rescue station in the Port, supporting vessels on the River Severn, which famously has the second largest tidal range in the world. Sharpness Docks manages bulk trade (mainly aggregates, scrap metal and other bulk products) with routes to France, Spain and Portugal. Entrance to the port is restricted by the tide and the site is accessed by road only.
- 4.20 Portland Port is a thriving commercial port located on the South Coast, operated by Portland Port Ltd and Portland Harbour Authority. The port's proximity to the English Channel shipping lanes provides an ideal location for vessels both in terms of distance and travel time, while benefiting from sheltered, clear and deep water with no locks, tides, beam or air draft restrictions. In water and on water storage options are available within the 1800 hectares of water space which includes the inner harbour sheltered by breakwaters and outer harbour which extends into Weymouth Bay. The port offers Marine/vessel and Landside Commercial Services. It handles approximately 500,000 tonnes of freight annually and serves a rapidly expanding cruise ship market with 32 cruise ships bringing nearly 39,000 passengers in 2018. Portland Port carries multiple functions in that it is a major refuel location for the Royal Fleet Auxiliary and supports the Royal Navy more generally. There are also Marina Services and the National Sailing Academy within the Harbour Authority area. The port is accessed by road only.
- 4.21 **Figure 4.5** illustrates the volume of goods processed at these ports from between 2010 and 2017. The volume of goods processed through the ports does vary and in this highly competitive market. It is important to ensure the Ports in the Gateway area are well connected to the national transport network to maintain their long-term viability.

**Figure 4.5 - Major and Minor freight traffic by port from 2010 to 2017**



#### Connectivity Summary

- Bristol is the most accessible urban centre in the Gateway area;
- If congestion is not managed in urban centres it will negatively impact Sub-national connectivity;
- Travel times to London by rail vary considerably;
- East / West connectivity between urban centres on the south coast is good, but—resilience is an issue;
- Improving North / South Connectivity are vital to improve productivity and increase access to markets located in the midlands and the north;
- Connectivity is a major issue for Bristol airport and this impacts negatively on the reputation of the airport and represents a potential brake on growth;
- Due to the close proximity of larger airports and the relative ease of access there is a lot of passenger leakage to Birmingham and the South East airports; and
- It is important to ensure the Ports in the Gateway area are well connected to the national transport network to maintain their long-term viability.

## 5.0 Planned Growth

### Housing

- 5.1 The need for additional housing is one of the most important requirements across the whole of the Western Gateway area, with over 300,000 new homes planned at various locations over the next 20 years. This will help address the national requirement for new housing.
- 5.2 In several parts of the Western Gateway, house prices are unaffordable for many first-time buyers and this is compounded by the fact that many of those taking up employment opportunities across the STB are on low wages. In some parts of the STB, for example, average home costs are fourteen times the value of average salaries.
- 5.3 The requirement for enhanced infrastructure to help facilitate new housing is evident with the following types of housing delivery being targeted:
- Housing *with* planning permission in place but where there are barriers stopping the development from going ahead (such as up-front infrastructure costs); and.
  - Housing *without* planning permission due to the scale of the up-front costs for new infrastructure.
- 5.4 Across the WECA, house prices are amongst the highest in the country (outside of London) and again, with a shortage of affordable homes. This problem is exacerbated by demand outstripping supply for housing. House prices have increased by 94% between 2001 and 2011 at the same time wages only increased by 29%.
- 5.5 An appropriate quantity and quality of housing and employment opportunities is important for the health, economic welfare and prosperity, social cohesion and the realisation of environmental goals. Each of the Western Gateway authorities is at a different stage of their Local Plan making process with several currently under review; as a consequence each covers a different time horizon.
- 5.6 Following Local Government reorganisation the newly formed BCP Council (Bournemouth, Christchurch and Poole) has made a commitment to review the existing individual local plans and adopt a single plan. The BCP region is planning for growth of circa 30,000 homes across the city region by 2026. The existing statuses of the Local Plans covering the area include:
- Poole Local Plan (2013-2033) adopted in November 2018;
  - The Bournemouth Borough Council Core Strategy was adopted in 2012 and sets the framework for development policies in Bournemouth. The Bournemouth Town Centre Area Action Plan was adopted in 2013 and contains specific proposals for 31 significant sites. The Local Plan Proposals Map has been superseded by the Amended Local Plan Proposals Map which was updated in May 2013. A Local Plan Review Issues Consultation was held in 2017 which comprised an initial stakeholder consultation and a Request for Potential Development Sites. A report was anticipated in 2018 however due to Local Government Reorganisation, this was postponed until after the reorganisation in April 2019 and subsequently a decision was made to progress a single BCP Local Plan; and

- Christchurch Local Plan (2013-2033) –The pre-submission draft was produced in March 2019.
- 5.7 Dorset Council (as with BCP) was newly formed following local government reorganisation. Work to create a single local plan will begin in 2019 with the aim of having the plan adopted by 2023. At the time of writing this report, there are five local plans covering the county. Dorset will deliver 40,000 new homes by 2033 based around towns and along the Portland-Weymouth- Dorchester growth corridor.
- 5.8 The pattern of proposed development in Dorset is one of dispersed medium sized housing sites. With the exception of proposals in Gillingham and Dorchester, there are no strategic housing allocations greater than 1000 dwellings. For the purposes of strategic analysis in **Figure 13** sites around urban settlements have been clustered to illustrate the scale of planned growth. At the time of writing local plans covering the new administrative area include:
- West Dorset, Weymouth & Portland Local Plan (2015-2030) is currently being reviewed;
  - North Dorset Local Plan (2016-2033) is currently being reviewed;
  - Purbeck Local Plan (2012-2027) is being reviewed and is at the Pre-submission stage due for adoption March 2019; and
  - East Dorset Local Plan (2014-2028) is being reviewed and it at the Options stage.
- 5.9 Gloucestershire County Council is the only two tier authority within the Western Gateway and as such it is not the planning authority. The Local Planning Authority function sits with the six district authorities and each is responsible for producing a local plan. Due to the high level of demand for housing, their close proximity and the travel interactions between Gloucester City, Cheltenham Borough and Tewkesbury Borough, have worked collaboratively to produce the Joint Core Strategy.
- 5.10 Joint Core Strategy covers the period up to 2031. The plan was adopted in 2017 and is currently under review. The existing plan allocates significant growth through urban extensions for Gloucester and Cheltenham. The Local Planning Authorities are currently reviewing their adopted local plans to accommodate additional housing need up to a new horizon date of 2036. It is likely that as part of this review process that the proposed Garden Town development of over 10,000 new dwellings and approximately 120 hectares of employment land in Ashchurch (near Tewkesbury) will be allocated. Ashchurch is located in close proximity to the M5 and is intersected by the A46, part of the SRN, providing an alternative route to the midlands.
- 5.11 At the time of writing the other adopted plans within Gloucestershire include:
- Cotswold District Local Plan covers the period up to 2031. The plan was adopted in 2018. The focus of the development is within Cirencester.
  - Stroud District Local Plan covers the period up to 2031. The plan was adopted in 2015 and is currently under review and will cover an extended timeframe up to 2036.

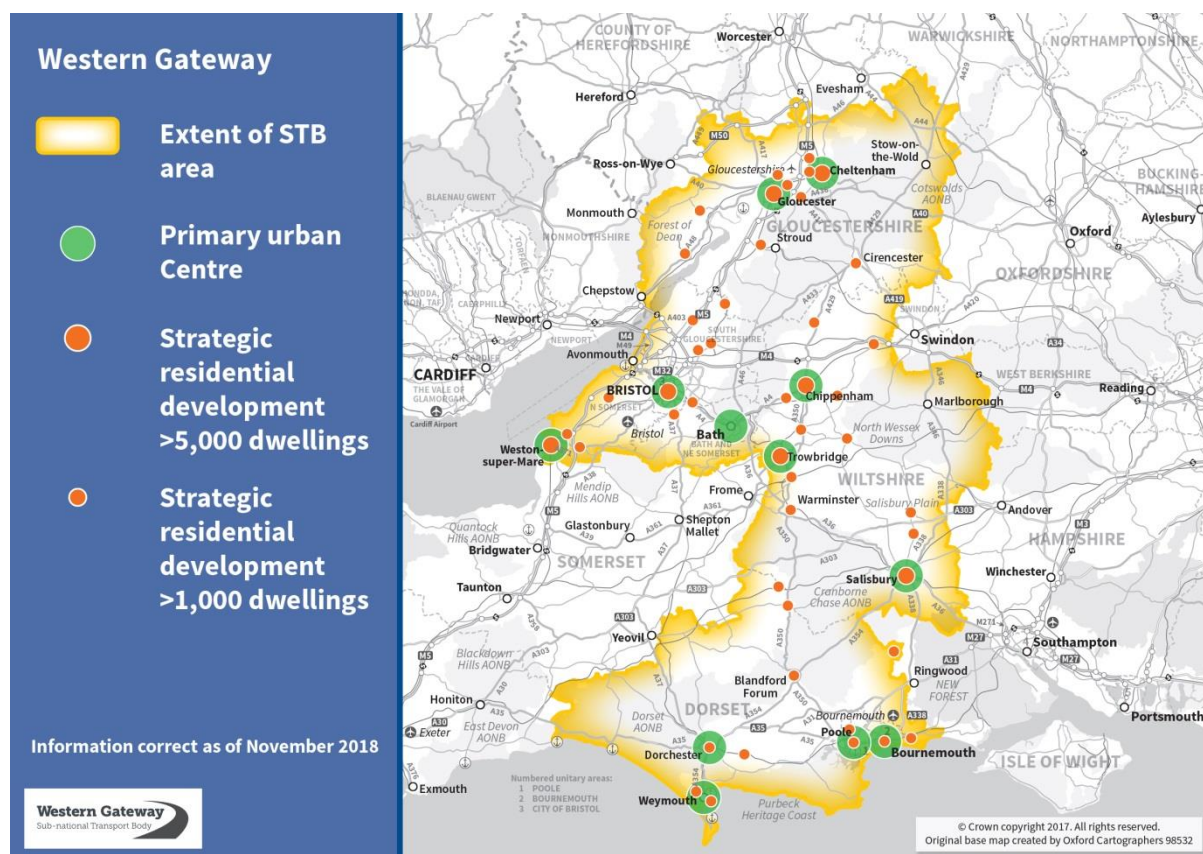
- Forest of Dean Core Strategy covers the period up to 2026: The plan was adopted 2012 and focuses development on three south forest towns of Cinderford, Lydney and Coleford.
- 5.12 The West of England authorities including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire are working collaboratively on a Joint Spatial Plan (JSP) which will cover the period up to 2036. The JSP Issues and Options stage was consulted on in 2017 and is currently in its Examination in Public (EiP) stage. The JSP allocates significant growth in the form of Strategic Development Locations through extensions to towns including Keynsham, Yate, Thornbury and Backwell and villages such as Buckover, Charfield, Banwell and Churchill. The JSP also seeks to optimise opportunities for development within urban areas, identifying the potential for a further 16,200 new homes to be delivered in built up areas across the West of England. This type of development is termed ‘Urban Living’ with options for change of use of non-residential brown field land to residential use and increasing the density of development on allocated sites. Allocated housing numbers per settlement area are still to be determined.
- 5.13 The Wiltshire Core Strategy Development Plan Document was formally adopted in 2015. The plan provides a positive and flexible overarching planning policy framework for the whole of Wiltshire (excluding Swindon) for the period up to 2026. Swindon Borough and Wiltshire Council are now working together to review their respective Local Plans and extend the period to which their plans relate to 2036. As part of this process, a non-statutory Swindon and Wiltshire Joint Spatial Framework Issues Paper and a Wiltshire Local Plan Review Consultation Paper were published in November 2017.
- 5.14 **Figure 5.1** identifies strategic housing sites (greater than 1,000 dwellings) as identified within adopted local plans (including those in the West of England Joint Spatial Plan Publication version) and **Figure 5.2** illustrates the location of these planned sites within the Western Gateway area. It should be noted that many of the local plans are undergoing review and as such the information contained within the table is subject to change. It should also be noted that for some of the sites identified construction work has commenced.

**Figure 5.1 - Strategic housing development sites**

Locations >5,000 dwellings	Locations >1,000 & <5,000 dwellings
Bristol (multiple sites) - 16,200 Gloucester (multiple sites) - 7,532 Trowbridge - 6,975 Bournemouth, Christchurch & Poole (multiple sites) - 6,900 Salisbury - 6,060 Cheltenham (multiple sites) - 5,611 Chippenham - 5,090 Weston-Super-Mare - 5,000	North West Cheltenham - 4,285 Dorchester - 4,000 Poole Town Centre - 3,200 Mendip Spring Garden Village - 2,675 Amesbury - 2,785 Nailsea - 2,575 Devizes - 2,500 Melksham - 2,370 Cirencester - 2,350 Gillingham - 2,200 Warminster - 2,060 Bournemouth Town Centre - 2,000 Crossways & Moreton - 2,000 Lydney - 1,900 Banwell Garden Village - 1,900 Coalpit Heath - 1,800 Chickerell - 1,800 Tidworth - 1,750 North Poole - 1,700 Whitchurch - 1,600 Westbury - 1,615 Calne - 1,605 Buckover - 1,500 North Brockworth - 1,500 Weymouth - 1,500 Royal Wootton Bassett - 1,455 North Keynsham - 1,400 Roeshot Hill - 1,400 Corsham - 1,395 Malmesbury - 1,395 West of Stonehouse - 1,350 Innsworth - 1,300 Blandford (Forum and St. Mary) - 1,200 Charfield - 1,200 Shaftsbury - 1,140 South Churchdown - 1,100 West of Cheltenham - 1,100 Cinderford - 1,050 Yate - 1,000 Alderholt - 1,000



**Figure 5.2 – Location of planned strategic housing sites.**



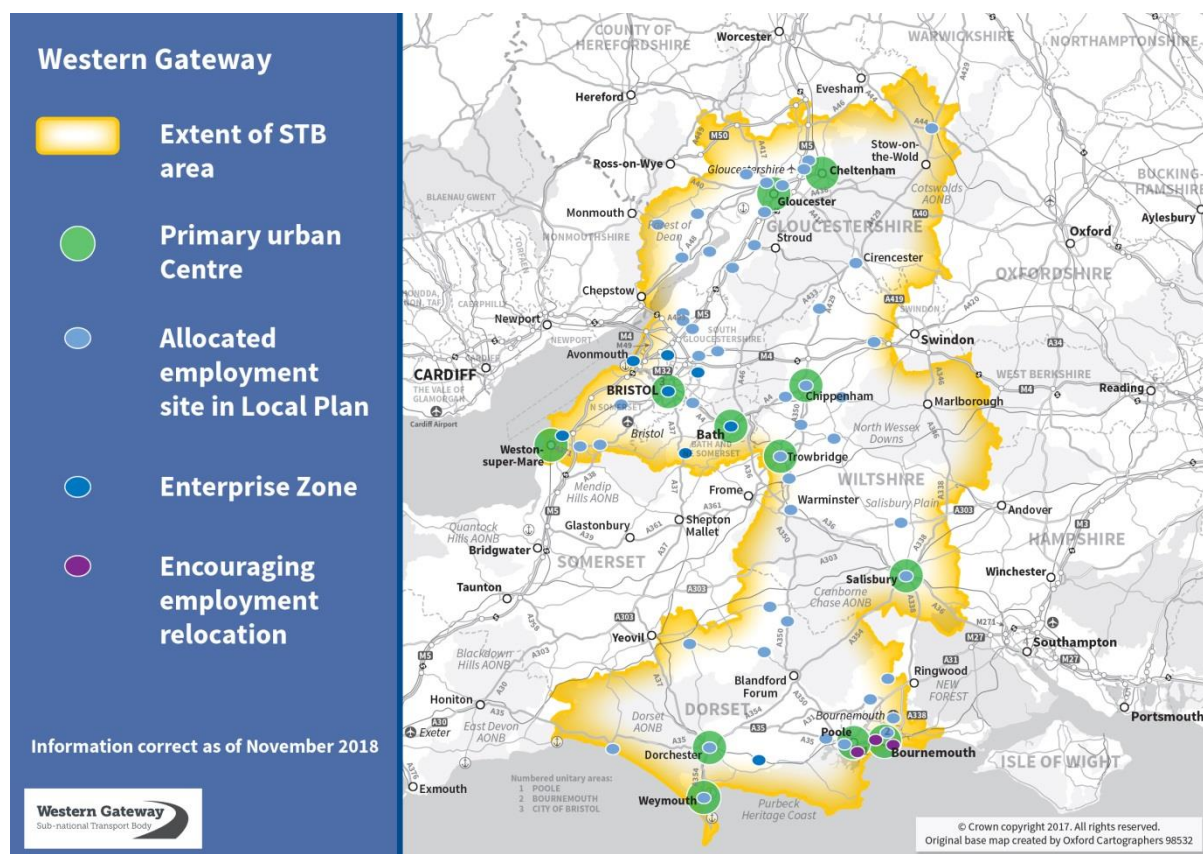
## Employment

- 5.15 The provision of new employment opportunities in the Western Gateway area is also important, especially since this will help with the retention of well qualified young people within the area.
- 5.16 **Figure 5.3** identifies strategic employment sites (greater than 5ha) identified within adopted Local Plans (including those in the West of England Joint Spatial Plan Publication version) and **Figure 5.4** illustrates the location of these sites and others encouraging business relocation within the Western Gateway area. It should be noted that in terms of employment land allocation this also needs to be considered in the context of the Economic Strategies outlined in **Section 6**.

**Figure 5.3 - Strategic employment sites**

Locations >20ha employment land allocated	Locations >5ha & <20 ha employment land allocated
<p>Dorset Innovation Park - 50ha West Cheltenham - 45ha Poole - 37ha Holton Heath - 35 ha Lydney - 30ha Ferndown Industrial Estate (Blunts Farm) - 30 ha Yate - 30ha Salisbury - 29ha Chippenham - 26.5 ha Trowbridge - 25ha North West Cheltenham - 23.4ha</p> <p><b>Enterprise Zones / Areas</b></p> <p>Bath Enterprise Zone Temple Meads Enterprise Zone Avonmouth/Sevenside Enterprise Area M5 Junction 21 Enterprise Area Emersons Green Enterprise Area Filton Enterprise Area Somer Valley Enterprise Zone Dorset Innovation Park (Enterprise Zone)</p>	<p>Westbury - 18.5ha South Churchdown - 17.4ha Amesbury - 17ha Sharpness - 17 ha Dorchester - 17ha Bournemouth Airport - 15ha Gillingham - 15 ha North Keynsham - 14ha Quedgeley East - 13 ha Woolbridge - 13 ha North East Cam - 12 ha Calne - 12ha Buckover - 11ha West of Stonehouse - 10 ha Backwell - 10.5ha Devizes - 9.9ha Weymouth - 9.6ha Cirencester - 9.1 ha Innsworth - 9.1ha Churchill - 7.4ha Moreton-in-Marsh - 7ha Shaftesbury - 7 ha Coleford - 6.8ha Sherborne - 6.2ha Cinderford - 6.1ha Corsham - 6ha Melksham - 6ha Warminster - 6ha Wessex Fields - 6ha Bridport - 5ha Royal Wootton Bassett - 5ha Malmesbury - 5ha Newent - 5ha Sturminster Newton - 5 ha Charfield - 5ha Coalpit Heath - 5ha Thornbury - 5ha Banwell - 5ha</p>

**Figure 5.4 – Sites encouraging business growth**



- 5.17 Attracting and retaining businesses within the STB area is of paramount importance to ensure the number of working age people increases. To demonstrate the scale of this issue, despite ONS forecasts indicating that the population of the Western Gateway area is set to increase by 448,000 people by 2041, only 74,000 will be of working age.
- 5.18 This will have a negative impact on the proportion of the population who will be of working age and will reduce the overall percentage of working age population in the Western Gateway area to 52% by 2041. Those areas recording the greatest reductions are Dorset (-8%), Gloucestershire (-7%) and Wiltshire (-7%).
- 5.19 Strategic Travel Corridor enhancements will therefore play a major role redressing this by providing improved connectivity and accessibility to attract and retain businesses within the area which could support the retention of the working age population.
- 5.20 The employment sites proposed throughout the Western Gateway area will generate well over 40,000 additional direct jobs if they can be successfully delivered (indirect jobs in the supply chain and induced jobs supported by the expenditure of the new employees will boost this further). Given the current transport connectivity constraints the full potential of these sites is unlikely to be achieved without investment on the strategic travel corridors.
- 5.21 Transport corridor enhancements will also shorten the timescales for delivery of the new employment sites as the viability of sites is improved.

### **Growth Summary**

- Local Plan time horizons vary;
- Many of the local plans are undergoing reviews so the information outlined in the section is subject to change and may well require review;
- Each area has an adopted local plan – providing long-term certainty on locations of future growth;
- Bournemouth, Christchurch and Poole’s strategy is focussed on their town centres and sustainable transport corridors;
- Dorset’s planned housing growth is one of dispersed medium sized developments;
- Gloucestershire’s growth strategy is focussed on its primary urban settlements and the M5 corridor;
- West of England growth strategy is focussed on Bristol and then dispersal to its smaller settlements;
- Wiltshire has focussed growth on its Principal Settlements and then to its Market Towns; and
- Enhanced travel corridor connectivity will:
  - a) help retain (and increase) working age people in the Western Gateway area;
  - b) help deliver the large number of employment sites; and
  - c) increase the productivity of those in employment throughout the area.

## 6.0 Economy

### Introduction

- 6.1 The Western Gateway covers a large geographical area and has a diverse economy encompassing some of the UK's fastest growing areas together with areas that are relatively rural and experience poor connectivity to centres of economic activity.
- 6.2 **Figure 6.1** identifies the key employment sites by local authority area and **Figure 6.2** illustrates their location. Once geographically identified it shows both the dispersed nature of many of these sites, conversely it also begins to focus on where the centres of employment are within the Western Gateway area. The urban locations of Bristol, Bath and Chippenham, Cheltenham and Gloucester and Bournemouth, Christchurch and Poole city region stand out as locations with multiple key employment sites.

**Figure 6.1 - key employment sites by local authority area**

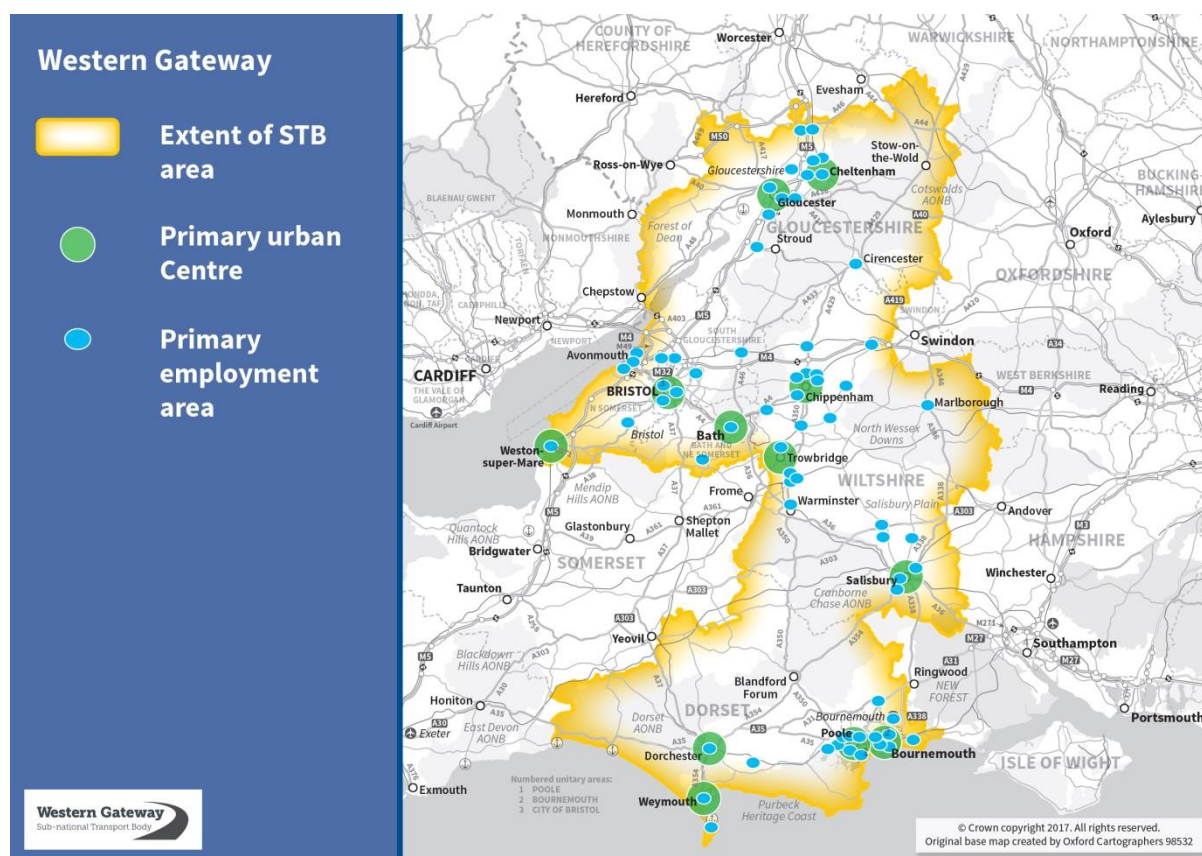
Local authority area	Key employment sites
Bournemouth, Christchurch and Poole	<p>Bournemouth</p> <ul style="list-style-type: none"> <li>• Town Centre</li> <li>• Lansdowne</li> <li>• Wallisdown</li> <li>• Wessex Fields</li> </ul> <p>Poole</p> <ul style="list-style-type: none"> <li>• Town Centre</li> <li>• Talbot Village</li> <li>• Poole Port</li> <li>• Poole Trade Park</li> <li>• Arena Business Park</li> <li>• Branksome Business Centre</li> <li>• Mannings Heath Industrial Estate</li> <li>• Nuffield Industrial estate</li> </ul> <p>Other – located away from primary centres</p> <ul style="list-style-type: none"> <li>• Christchurch Town Centre</li> <li>• Bournemouth Airport</li> </ul>
Dorset	<p>Dorchester Town Centre</p> <p>Weymouth &amp; Portland Port</p> <p>Others – located away from primary centres</p> <ul style="list-style-type: none"> <li>• Dorset Innovation Park (Enterprise Zone)</li> <li>• Ferndown &amp; Uddens Industrial Estate</li> <li>• Holton Heath Industrial Estate</li> </ul>
Gloucestershire	<p>Gloucester</p> <ul style="list-style-type: none"> <li>• City Centre</li> <li>• Barnwood Business Park</li> <li>• Brockworth Business Pak</li> <li>• Waterwells &amp; Olympus Business Park</li> </ul> <p>Cheltenham</p> <ul style="list-style-type: none"> <li>• Town Centre</li> <li>• Kingsditch Trading Estate</li> <li>• West of Cheltenham</li> </ul>

	<p>Tewkesbury</p> <ul style="list-style-type: none"> <li>• Ashchurch Business Centre</li> <li>• Tewkesbury Business Park</li> </ul> <p>Others – located away from primary centres</p> <ul style="list-style-type: none"> <li>• Bishop’s Cleeve</li> <li>• Cirencester</li> <li>• Gloucestershire Airport – Staverton</li> <li>• Stonehouse</li> </ul>
<p>West of England – including Bath &amp; North East Somerset Bristol City North Somerset South Gloucestershire</p>	<p>Bath</p> <ul style="list-style-type: none"> <li>• City centre</li> <li>• Bath Enterprise Zone</li> </ul> <p>Bristol</p> <ul style="list-style-type: none"> <li>• City Centre</li> <li>• Temple Meads Enterprise Zone</li> <li>• South Bristol</li> </ul> <p>Weston-Super-Mare</p> <p>Others – located away from primary centres</p> <ul style="list-style-type: none"> <li>• Avonmouth/Sevenside Enterprise Area</li> <li>• M5 Junction 21 Enterprise Area</li> <li>• Royal Portbury Dock</li> <li>• Bristol Airport</li> <li>• Emersons Green Enterprise Area</li> <li>• Filton Enterprise Area</li> <li>• Somer Valley Enterprise Zone</li> </ul>
<p>Wiltshire</p>	<ul style="list-style-type: none"> <li>• Chippenham <ul style="list-style-type: none"> <li>○ Parsonage Way</li> <li>○ Langley Park</li> <li>○ Greenways Business Park</li> <li>○ Methuen Park</li> <li>○ Bumpers Farm Industrial Estate</li> <li>○ Chippenham Gateway</li> </ul> </li> <li>• Salisbury <ul style="list-style-type: none"> <li>○ Churchfields Industrial Estate</li> <li>○ Old Sarum</li> <li>○ High Post/Chemring</li> </ul> </li> <li>• Trowbridge <ul style="list-style-type: none"> <li>○ White Horse Business Park</li> <li>○ Canal Road Industrial Estate</li> </ul> </li> <li>• Others – located away from primary centres <ul style="list-style-type: none"> <li>○ Amesbury <ul style="list-style-type: none"> <li>• Solstice Park</li> <li>• Boscombe Down</li> <li>• Porton, Amesbury</li> </ul> </li> <li>○ Calne - Porte Marsh Industrial Estate</li> <li>○ Corsham <ul style="list-style-type: none"> <li>• Basil Hill (MOD Corsham)</li> <li>• Spring Park,</li> <li>• Fiveways Trading Estate</li> <li>• Leafield Industrial Estate</li> </ul> </li> <li>○ Devizes</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>■ Hopton Park</li> <li>■ Nursteed Road</li> <li>○ Downton - Downton Business Park</li> <li>○ Malmesbury/Hullavington - Dyson Site</li> <li>○ Marlborough - Marlborough Business Park</li> <li>○ Melksham <ul style="list-style-type: none"> <li>● Bowerhill Industrial Estate</li> <li>● Hampton Business Park</li> </ul> </li> <li>○ Royal Wootton Bassett - Interface Industrial Estate</li> <li>○ Warminster <ul style="list-style-type: none"> <li>● Warminster Business Park</li> <li>● Crusader Park</li> </ul> </li> <li>○ Westbury <ul style="list-style-type: none"> <li>● Hawke Ridge Business Park</li> <li>● West Wiltshire Trading Estate</li> <li>● Northacre Trading Estate</li> </ul> </li> </ul>
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Figure 6.2– Key employment sites within the Western Gateway area



### Local Enterprise Partnerships

6.3 Each Local authority and Local Enterprise Partnership (LEP) has its own Economic Strategy focusing on local priorities. As the Western Gateway is concerned with strategic issues the information outlined within this section only considers those parts of strategies addressing strategic issues. For more information on local economic strategies it is recommended that

the Strategic Economic Plans and emerging Industrial Strategies produced by the Western Gateway LEPs are reviewed. At the time of writing, Local Industrial Strategies covering the area were in the process of being produced, as the Western Gateway Strategic Transport Strategy emerges it is essential it supports and enables delivery of the priorities outlined in these strategies.

6.4 There are four LEPs in the Western Gateway area:

- Dorset LEP
- GFirst LEP
- Swindon and Wiltshire LEP
- West of England LEP

6.5 With the exception of the Swindon and Wiltshire LEP, where Swindon is a member of the England's Economic Heartland STB, there are no deviations between LEP boundaries and the Western Gateway area. The Swindon anomaly will hopefully be resolved by inviting Swindon Borough Council to be Associate Member of the Western Gateway STB.

### **Summary of Strategic Economic Plans**

#### **Dorset**

6.6 By 2033 Bournemouth & Poole will be one of Britain's most sustainable Core City-Regions. Its competitiveness will be driven by innovation.

6.7 The City (Bournemouth, Christchurch and Poole city region) and the surrounding area will be a focus for international connectivity and infrastructure, including two universities, the airport and port and will be home to internationally competitive sectors including Advanced Manufacturing and Financial Services. A key distinction in rural Dorset is the promotion of its world class natural environment provided by its maritime assets, Market Towns and the Dorset Innovation Park Enterprise Zone. The Western Dorset Economic Growth Strategy identifies two economic growth zones: Portland-Weymouth-Dorchester corridor, and Blandford-Gillingham-Shaftesbury corridor.

6.8 Dorset has just over 30,000 businesses. Around 90% of these are micro-businesses with less than ten employees, which is consistent with the national business size profile. Dorset currently has below average productivity and most parts of Dorset are less competitive than the national average. In general, earnings are below the national average.

6.9 Dorset LEP vision is for efficient transport connectivity. This includes: improved road linkages to the north, west and east; improved rail connections (in terms of journey time, frequency and reliability) to London, Bristol, Taunton and Exeter; less congestion in the Bournemouth, Christchurch and Poole city region and widespread use of sustainable transport options for journeys to work, education and training. Their vision is for people and goods to move easily between homes, schools, workplaces, public facilities and major transport infrastructure with minimal impact on the environment.



- 6.10 Dorset LEP wants to maximise the potential of major strategic employment sites such as Bournemouth Airport, Bournemouth Town Centre, the Port of Poole and the Dorset Enterprise Zone. This means investing in the infrastructure to unlock these and other strategic sites and ensures sustainable travel and access to them.

<b>Dorset LEP Key Transport issues:</b>	<ul style="list-style-type: none"> <li>• Improved strategic connectivity (Road and Rail) to London, &amp; Bristol; and</li> <li>• Improved sustainable transport options for urban travel.</li> </ul>
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## Gloucestershire

- 6.11 Gloucestershire has a prosperous and resilient economy set within a highly attractive natural environment, which offers a high standard of living for local residents. The county benefits from a highly accessible transport network which provides good connectivity to highway and rail networks. This enables its businesses, commuters and leisure users to move efficiently on local and strategic transport networks, using both private and public transport. The major arterial route in the county, providing transport links to the midlands, north, and south west, is the M5 motorway.
- 6.12 Gloucestershire is in the top three LEPs for employment within knowledge intensive manufacturing and services; it has the highest percentage in all LEP regions of employees in high and medium technology manufacturing and an abundance of SME's in cyber security and creative industries, including digital, all of which have high growth potential; and for some businesses there is capacity for significant expansion in export.
- 6.13 Gloucestershire needs to retain and expand its productive high value manufacturing sector, whilst also supporting accelerated growth in knowledge-intensive services which are growing, but still under-represented relative to the rest of the UK.
- 6.14 The primary aim of the LEP's transport strategy is to support the M5 Growth Zone by ensuring the availability of quality employment land in close proximity to the M5 motorway. This will serve latent demand in the marketplace. The focus is for the delivery of employment land around Junctions 9 and 10. This is supported by a number of transport related proposals linked to improved junction capacity and access.
- 6.15 Local challenges within Gloucestershire include reducing urban congestion and network pinch points across the county.

<b>GFirst LEP Key Transport issues:</b>	<ul style="list-style-type: none"> <li>• Improved access to M5 including junction improvements;</li> <li>• Removal of pinch point on A417 (linking M5 with M4); and</li> <li>• A46 corridor improvements.</li> </ul>
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## West of England

- 6.16 The West of England including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire is home to one million people and growing. The economy is worth £25.5bn and £10bn annually to the Treasury. The area includes four world class universities with 21 world leading academic departments. They attract 73,295 students and £227m of External Research Funds. It should be noted that in addition to the LEP Strategic Economic Plans North Somerset Council has adopted its own Economic Plan North Somerset reflecting its diverse range of sectors making up its economic base, including world leading high-technology manufacturers making everything from aircraft parts to plasma screens and subsea control systems
- 6.17 The region has been on the leading edge of innovation for centuries, it provides world class offers in design, culture, trade, shipping, engineering, aerospace, microelectronics, composites, robotics, green technologies, social enterprise, connectivity and digital creativity. Bristol forms part of the London-Manchester 'golden triangle' by BBC, Creative England and Creative Skillset. The area also includes the largest UK aerospace/defence cluster and is one of the largest concentrations in Europe, mostly based in Bristol's Northern Fringe.
- 6.18 There are seven key growth areas in the West of England and transport capacity improvements would effectively unlock almost 19,000 jobs (net) across these sites, including the Temple Quarter Enterprise Zone, South Bristol, Bath and Weston-Super-Mare. There is a focus on Filton and Avonmouth / Severnside Enterprise zones to encourage manufacturing clustering and provide room for growth. Manufacturing output in the area is roughly 20% higher than it is nationally.
- 6.19 The three bus rapid transit schemes designed to improve travel capacity, alongside the Bath Transportation Package and the Weston Package, are estimated to unlock a £600 million increase in future economic output in the West of England, increasing to £1.2 billion if the Greater Bristol Metro, Temple Quarter Transport package and M49 new junction are included. Investment in these transport packages will deliver a very high return on capital investment, totalling on average £3.60 additional annual Gross Value Added (GVA) in the West of England per pound spent on the schemes.

<p><b>West of England LEP Key Transport issues:</b></p>	<ul style="list-style-type: none"> <li>• Additional transport capacity is key to unlocking employment land;</li> <li>• Within urban environments this will be delivered through strategic public transport corridors; and</li> <li>• Away from urban centres highway capacity improvements are required including: <ul style="list-style-type: none"> <li>○ A new M4 junction 18a</li> <li>○ Improved M5 junction 14</li> <li>○ A new M5 junction 21a</li> <li>○ A new junction on the M49</li> <li>○ Improved access to Bristol Airport</li> </ul> </li> </ul>
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## Wiltshire

- 6.20 The Swindon and Wiltshire LEP will focus on their existing strengths and established business sectors to build an outstanding, sustainable business environment in which the local economy will thrive.
- 6.21 By 2026, the area wants to be world renowned for innovation, entrepreneurialism and a great quality of life. The population will have increased and this must be matched by the employment offer providing higher skilled jobs and high value economic growth. The LEP has a clear idea of how to achieve it:
- Support the Swindon-M4 Growth Zone into a new phase of growth, building on its strengths in manufacturing and commerce and making its urban areas attractive to investors
  - Deliver the significant growth planned for the A350 Growth Zone, exploiting the digital cluster and advanced manufacturing capacity, and investing in the regeneration of the urban areas
  - Restructure the Salisbury A303 Growth Zone's economic base, leveraging the opportunities provided by the presence of the Military, Life Sciences and Defence Technologies specialisms at Porton, and building on its world class reputation as a visitor destination
- 6.22 Transport has a key role to play in supporting the LEP priorities; efficient transport networks are required to increase the 'effective density' of a location by increasing the number of people who can access the area quickly and easily. This expands the prospective pool of talent to businesses, creates opportunities for networking and helps to attract supporting services and amenities. Transport investment can also unlock employment and housing sites which, if in the right locations, can facilitate accelerated economic growth. The LEP will target investment in the Growth Zones to exploit these advantages. Chippenham and Corsham are included in both the Swindon-M4 Growth Zone and the A350 Growth Zone as they are pivotal locations in the development of both the M4 and A350 economic corridors.
- 6.23 Their inclusion in the Swindon M4 Growth Zone is important as they offer the potential to extend growth into the area that has developed out of London through to Reading and Swindon, as well as the potential to draw in investment from the west out of Bristol and Bath through the development potential at Junction 17 will also provide an important link in the A350 Growth Zone, fostering business development and creating clusters of like minded businesses. The A350 Growth Zone which extends from Malmesbury to the north to Warminster in the south.

<p><b>Swindon and Wiltshire LEP</b> <b>Key Transport issues:</b></p>	<ul style="list-style-type: none"> <li>• Investment in transport packages to support the significant planned housing and employment growth in Chippenham, Trowbridge and Salisbury</li> <li>• Investment in the A350 primary route to ensure it can fulfil its north-south strategic function and support growth</li> <li>• Working with Highways England to ensure that the A36 can fulfil its strategic role and support growth</li> </ul>
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	<ul style="list-style-type: none"> <li>• Investment in improving transport networks to enhance connectivity options and help reduce congestion at key pinch points</li> <li>• Strengthen the local rail infrastructure to support growth, maximise opportunities for enhanced services and improve interchange.</li> </ul>
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## Productivity

- 6.24 There are several areas in the Western Gateway area, particularly in the less well connected Dorset / coastal area and Wiltshire areas, where productivity is below that in other parts of the STB area as well as being below the national average.
- 6.25 With productivity being such an important indicator of economic activity, this is why enhanced corridor connectivity is so important for the Western Gateway as improved corridors will enable these areas to have much better access to economic centres of activity such as Bristol.
- 6.26 ONS data also shows that not only do certain areas in the Western Gateway lag behind other areas with respect to productivity but that also that the 'productivity gap' has been widening over time.
- 6.27 Without intervention on the strategic corridors, this gap is likely to widen further over time.

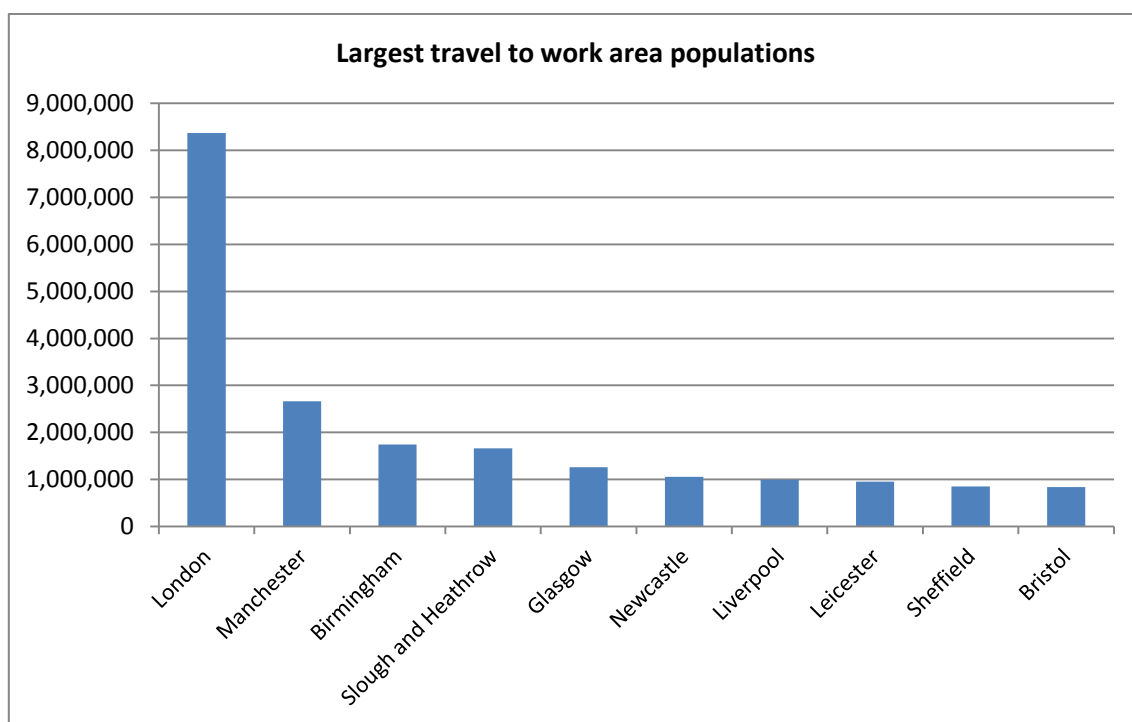
## Travel to work areas<sup>4</sup>

- 6.28 Travel to work areas (TTWAs) is a geography created to approximate labour market areas based on information recorded through the 2011 Census. They are derived to reflect self-contained areas in which most people both live and work. At a national level the highest employment rates for Travel to Work Areas were generally observed in the South East and South West. **Figure 6.3** illustrates data produced by the ONS on the largest TTWAs populations in the UK. London had the largest population of all TTWAs followed by Manchester. Bristol is ranked tenth with a TTTWA population of 835,000.
- 6.29 A headline employment rate can be calculated by dividing the employment level for those aged from 16 - 64 by the population for that age group. Analysis undertaken by the ONS based on estimates for the period April 2015 to March 2016 using employment data from the TTWAs and the Annual Population Survey has calculated a national employment rate of 73.7% in Great Britain. Two areas in the Western Gateway were recorded as having the highest national employment rates in Great Britain: Gloucester 82.4% and Salisbury 82.3%

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<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/traveltoworkareaanalysisinngreatbritain/2016>

**Figure 6.3 - Travel to work area populations**



6.30 Job density figures produced by the ONS represent the ratio of total jobs to population aged 16-64. Total jobs include employees, self-employed, government-supported trainees and HM Forces. For example a job density of 1.0 would mean that there is one job for every resident aged 16-64. **Figure 6.4** outlines the number of jobs and the job density for local authority areas within the Western Gateway.

6.31 When job density is considered, the highest ratios (where more jobs exist than the number of working age population) are in West Dorset and Cotswold (both rural areas) followed by Poole and Cheltenham (both smaller affluent urban areas). Those areas with the lowest job ratios include; Weymouth and Portland (which might be impacted by a greater non-working age population) and the Forest of Dean (through its rurality and access issues).

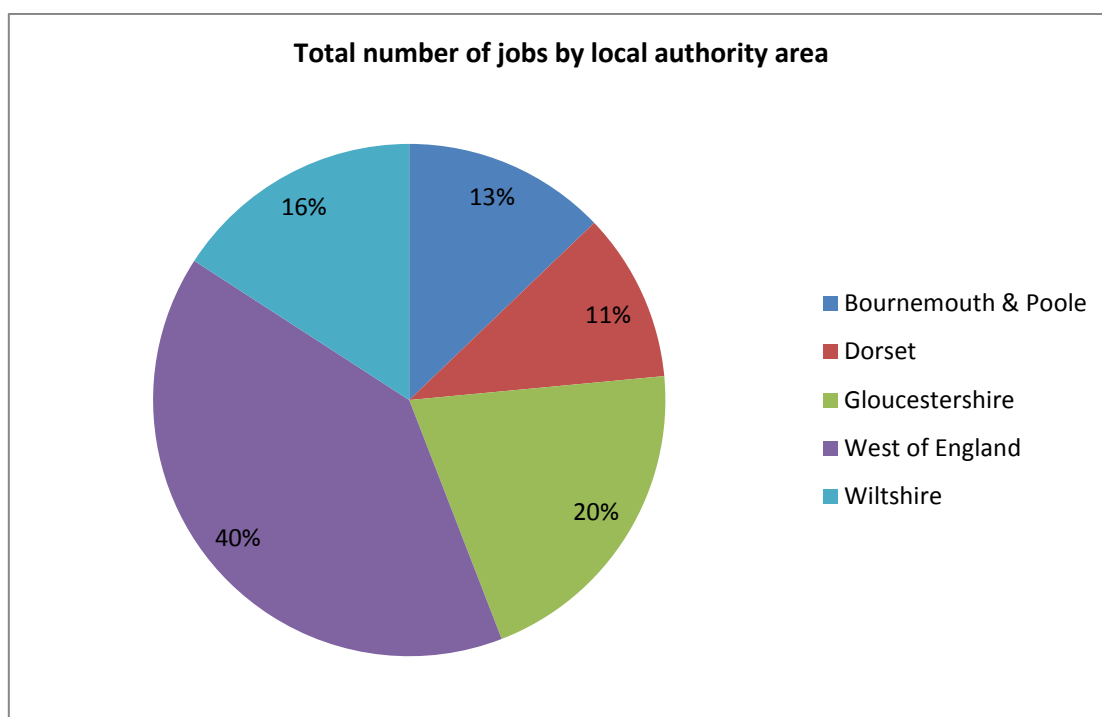
**Figure 6.4: Number of jobs and Job Density Ratios across the Western Gateway area**

Local Authority	Number of jobs	Job density
Bournemouth	97,000	0.77
Poole	93,000	1.03
Christchurch	23,000	0.86
<b>Total</b>	<b>213,000</b>	
East Dorset	39,000	0.81
North Dorset	32,000	0.77
Purbeck	21,000	0.79
West Dorset	63,000	1.14
Weymouth and Portland	22,000	0.56
<b>Total</b>	<b>177,000</b>	

Cheltenham	76,000	1.02
Cotswold	52,000	1.04
Forest of Dean	32,000	0.63
Gloucester	69,000	0.85
Stroud	62,000	0.88
Tewkesbury	51,000	0.97
<b>Total</b>	<b>342,000</b>	
Bath and North East Somerset	104,000	0.86
Bristol, City of	303,000	0.97
North Somerset	95,000	0.77
South Gloucestershire	162,000	0.93
<b>Total</b>	<b>664,000</b>	
Wiltshire	263,000	0.89
<b>Total</b>	<b>263,000</b>	
<b>Grand Total</b>	<b>1,659,000</b>	

- 6.32 Based on the number of jobs identified in **Figure 6.4** the Western Gateway area supports over 1.6 million jobs. Bristol and South Gloucestershire provide the largest number of jobs in the Western Gateway area equating to approximately 28% of all jobs available.
- 6.33 **Figure 6.5** illustrates the number of jobs by area. The two city regions of the West of England and Bournemouth, Christchurch and Poole provide 53% of the Western Gateway Areas jobs.
- 6.34 Travel to work data collected through the 2011 Census provides an interesting insight into strategic journey patterns. The net change between inbound and outbound journeys can provide a further level of understanding on the importance of connectivity between areas. **Figure 6.6** documents the net change between inbound and outbound trips. This data can provide a level of understanding between the complexities of job availability, the cost of living and quality of life considerations of living in an area i.e. where there is a positive number indicates that more people travel into the centre for work than leave to work elsewhere, and a negative number indicates the reverse. **Figure 6.7** provides a further level of understanding by identifying the high frequency journeys made between areas. The Table further enforces the concept of the northern, central and southern geographic bands and interactions between the associated primary urban areas. The strategic importance of Bristol to the Western Gateway area is evident.

**Figure 6.5 – Percentage of jobs provided by geographic area**



6.35 The information presented also highlights the importance of trips outside the Western Gateway area, to areas including: Hampshire, Somerset, Swindon, Wales and Worcestershire. Coincidentally each is located in a different STB area and this highlights the importance of continued working and engagement with neighbouring areas. The impact of the toll removal on the Severn Crossings from December 2019 may further increase the number of journeys to and from Wales and the level of influence South Wales has on trips within the Western Gateway area.

**Figure 6.6 - Net change in external work based on all inbound and outbound trips (2011 Census)**

Area	Net change
Bristol	26,300
Poole	7,200
South Gloucestershire	5,600
Bath & North East Somerset	5,100
Gloucestershire	2,437
Bournemouth	-8,100
Dorset (including Christchurch)	-12,400
North Somerset	-14,000
Wiltshire	-16,600

**Figure 6.7 - High frequency work based inbound and outbound trips (2011 Census)**

Area	Strategic Inbound Movements	Strategic Outbound Movements
Poole	Bournemouth - 14,300 Dorset - 12,600 New Forest - 1,000	Bournemouth - 10,900 Dorset - 6,100 New Forest - 2,600
Bournemouth	Poole - 10,900 Dorset - 8,200 New Forest - 2,200	Poole - 14,300 Dorset - 8,700 New Forest - 2,600
Dorset (including Christchurch)	Bournemouth - 8,700 Poole - 5,200 New Forest - 4,800 South Somerset - 4,900 Wiltshire - 1,100	Bournemouth - 9,400 Poole - 8,400 South Somerset - 4,800 Wiltshire - 1,900
Gloucestershire	Wychavon - 4,400 West of England - 3,600 Wiltshire - 2,000 Swindon - 1,800 Herefordshire - 1,200 Monmouthshire - 1,000	West of England - 9,500 Herefordshire - 1,700 Monmouthshire - 1,700 Swindon - 1,900 Wiltshire - 1,400 West Oxfordshire - 1,000
Wiltshire	Swindon - 7,200 West of England - 6,400 Hampshire - 4,200 North Dorset - 1,900 Mendip - 3,100 Cotswold - 1,400	West of England - 14,200 Swindon - 10,600 Hampshire - 6,400 West Berkshire - 2,200 Cotswold - 2,000 Mendip - 1,800 Westminster / City of London - 1,600 North Dorset - 1,100
Bath	Wiltshire - 8,300 Bristol - 5,300 South Gloucestershire - 5,000 Mendip - 4,300 North Somerset - 1,200	Wiltshire - 3,400 Bristol - 8,400 South Gloucestershire - 4,000 Mendip - 2,900 North Somerset - 1,200
Bristol	South Gloucestershire - 34,600 North Somerset - 17,500 Bath & North East Somerset - 8,400 Wales - 3,000 Somerset - 3,000 Wiltshire - 2,800 Stroud - 1,500	South Gloucestershire - 28,900 North Somerset - 7,100 Bath & North East Somerset - 5,400 Wiltshire - 1,500
North Somerset	Bristol - 7,100 Sedgemoor - 3,400 South Glos. - 2,800 Bath & NE Somerset - 1,200	Bristol - 17,500 Sedgemoor - 2,400 South Glos. - 5,700 Bath & NE Somerset - 1,200
South Gloucestershire	Bristol - 29,000 North Somerset - 5,700 Bath & North East Somerset - 3,000 Wiltshire - 3,200 Stroud - 3,100 Wales - 2,200	Bristol - 34,600 North Somerset - 3,000 Bath & North East Somerset - 5,000 Wiltshire - 1,600 Stroud - 1,600



### **Sectoral strengths**

- 6.36 A function of transport is to support economic growth by enabling key employment sectors to thrive. The role for transport is broadly two-fold: ensure there is sufficient capacity in the transport network to enable employees to get to work and make business trips; and that goods can be transported to facilitate supply chains using good quality reliable strategic networks.
- 6.37 The Western Gateway's economy comprises several important sectors that will benefit from enhanced connectivity, if they are to continue their growth trajectories and provide a critical source of high value jobs in the region (at a time of economic uncertainty and a need to 'rebalance the economy' away from the South East).
- 6.38 From the perspective of the different sectors that are captured by the productivity gains (agglomeration) calculations outlined in the Economic Connectivity Study provided in **Appendix A**. The main sectors in the STB's economy are outlined:

### **Digital, Creative and Information Services**

- 6.39 This sector is one of the most important and fastest growing throughout the STB area and in Dorset, for example, employs 7,900 people and contributes £349 million to the county's economy. At the UK's leading animation school at Bournemouth University, research and pioneering computer-animated simulation programmes are being undertaken and developed.
- 6.40 The West of England has many businesses within this sector that provide a range of services including broadcasting activities, media services, motion picture production and advertising. As one of the UNESCO Global Creative Cities Network, Bristol has had particular success in the creative industries, as shown by BBC relocating its food and farming teams to Bristol and Channel 4's recent choice of Bristol's Finzels Reach as the home of its new Creative Hub.
- 6.41 Companies and organisations in this sector include the BBC, ITV, Aardman Animations, Future Publishing, Yogscast and Silverback Films.
- 6.42 When combined with the high tech sector (see below), total employment in this sector in the West of England area is over 43,700 (7% of the total) whilst there are over 6,500 businesses in the region (representing 14% of the total). In Wiltshire, the Information Communication Technology (ICT) and digital, creative, professional and financial, support services support 16,000 businesses and employ 99,500 people.

### **Advanced Manufacturing, Engineering and Marine Engineering**

- 6.43 Given its location and strong advanced engineering history (associated to a large extent with military activities in the region), Dorset has one of the leading aerospace industries in the UK and employs 15,400 people and £800 million to the local economy.
- 6.44 Companies in this sector are engaged in Research and Development, design and manufacturing. Some of the most well-known companies in this sector in Dorset include BAE Systems and QinetiQ.

- 6.45 In the South Gloucestershire and WECA area, advanced engineering and aerospace is recognised by the government as a key sector for the West of England economy and one that is important for increasing future exports. The region boasts the UK's largest aerospace/defence cluster, giving it one of the largest concentrations of such businesses in Europe. In recent years, Airbus opened a new engineering HQ at Filton in 2014 and the National Composites Centre opened in 2011 as part of the High Value Manufacturing Catapult. Key companies include Airbus, GKN Aerospace, Rolls Royce, BAE Systems and Honeywell.
- 6.46 Advanced manufacturing is also a key sector throughout Wiltshire and activities in this sector accounted for 13% of all GVA in the county during 2017. Advanced manufacturing is also seen as the sector with the most growth potential.
- 6.47 There are over 1,850 businesses employing over 43,750 people with 28,450 directly employed in manufacturing and 15,300 employed in advanced manufacturing. To illustrate just how important these sectors are in Wiltshire, the proportion of employment in advanced manufacturing is 50% higher than the national average whilst the proportion employed in manufacturing is 20% higher than the national average. The key companies in the Swindon and Wiltshire LEP area include: Dyson Technologies: 2,900 employees; Honda: 3,700 employees; and BMW, Intel and Zircon.
- 6.48 Although Honda is a major employer in the county, the company's recent decision to close its plant here will have a significant impact on both direct employment in the area as well as employment in the supply chain. Enhanced corridor connectivity can play a major role alleviating the impacts of this closure as inward investors and businesses are far more likely to look at the area as a potential area to invest if there is good transport access from all points within the Western Gateway and beyond.

### **Professional and Legal Services**

- 6.49 In the West of England area, professional and legal services include financial services, insurance, legal, accounting and market research. Together these account for a large amount of employment in the region.
- 6.50 Bristol and Bath have been recognised as well-established centres for the sector as it has evolved quickly (due to technological change and service innovation). As an example of this, Bristol is home to the UK headquarters of Triodos Bank, a leading sustainable bank.
- 6.51 The sector accounts for 58,000 people in the region (10% of total employment) whilst there are 5,975 businesses in the region (13% of all businesses).
- 6.52 The major companies in the region include Ernst & Young, PwC, Deloitte, Burges Salmon, Osborne Clarke, Hargreaves Lansdown and DAS.

### **The Energy Sector**

- 6.53 Dorset's location on the South Coast means that it is in an ideal environment for the renewable energy sector. A total of 3,500 people are employed whilst the sector contributes

£172 million to Dorset's economy. The types of renewable energy that have seen the fastest growth include wave and tidal power and solar radiation. Given the level of demand, the energy sector continues to grow in this part of the STB.

- 6.54 Gloucestershire has a long history supporting the energy industry, including nuclear and renewables. Currently, this sector provides approximately 2,300 jobs within 65 local businesses, mostly around Cheltenham and Gloucester. Important businesses in the county include EDF Energy.
- 6.55 EcoTricity specialises in green energy and is based in Stroud. As well as the economic benefits in terms of job creation and infrastructure investment, the company's green credentials and roots in the local community reflect favourably on Gloucestershire in an energy sector where renewables are becoming increasingly valuable. With the prominence of electric vehicles steadily rising as well as central Government's ambition to ban the sale of petrol and diesel vehicles by 2040, new and innovative ways of generating renewable energy to service a transformed private vehicle fleet could become a key national priority in the decades to come.

### **The High Tech Sector**

- 6.56 This sector covers technology, communications, financial and professional services and software companies. In the high tech sector, the West of England region is notable as a leader in silicon design outside of the US and there are over 4,000 companies, universities and research institutes in this sector. In total, 16,400 people are employed in the high tech sector and it contributes £162.5 million in GVA (with a 212% increase in productivity since 1998).
- 6.57 The Bristol and WECA area is also one of six European "Science Cities" in the UK and is responsible for the manufacture of technology, computer consultancy and software publishing. Key companies include Hewlett Packard, IBM, Toshiba Research Europe, Graphcore, Ultrahaptics and Five AI.

### **Manufacturing**

- 6.58 Manufacturing continues to be an important sector in the STB area and in the WECA area, manufacturing output is approximately 20% higher than it is nationally (and 30% higher than the West of England economy as a whole). There are also 1,500 construction companies in this part of the STB.
- 6.59 Gloucestershire's manufacturing sector is also substantial and is the second largest employment sector after health, employing 36,000 people in 2013. This employment level is expected to stay the same over the next decade. The sector also contributed over £2 billion in GVA across Gloucestershire's economy and is worth almost 20% in terms of economic output in the county. The ratio of output to employment is high, this demonstrating high levels of productivity.

## **The Health Sector**

- 6.60 The health sector is particularly important in Gloucestershire and contributed £865 million in GVA whilst providing employment for 37,800 people in 2013. The sector is becoming increasingly important in the county with an additional 11,400 jobs due to be created by 2025.

## **Public Administration, Defence, Health and Education**

- 6.61 These public sector industries remain important throughout the Western Gateway with public administration activities in Gloucestershire contributing over £1 billion in GVA and generating over 19,000 jobs in the sector.
- 6.62 Employers in the county include GCHQ as well as the new National Cyber Innovation Centre in Cheltenham. The latter will generate over 7,500 jobs and will require 1,100 in the first phase (with the potential for further homes in the longer term).
- 6.63 In Wiltshire, public administration and other public sector activities are an important sector for the local economy. Military investment has driven economic development and growth in Porton, Corsham and Lyneham whilst the Ministry of Defence (MoD) has invested over £1 billion in the region.
- 6.64 This sector accounts for 18% of Wiltshire's GVA and according to UK Business Count data, there are over 76,900 people employed in the sector. Growth has also been strong in recent years with employee numbers increasing by 9% between 2011 and 2016. In addition, the sector has grown by 80% between 2012 and 2017 with the education sector growing at 203% over this period.

## **Specific Military-Related Industries**

- 6.65 A unique ICT infrastructure has developed near Corsham where the Ministry of Defence (MoD) and the private sector have invested heavily in secure communications and data storage.
- 6.66 Corsham is home to a growing cluster of digital industries as well as the most secure cloud data and electrical supply centres in the country.
- 6.67 There are also strong links with the "100,000 Whole Genome Project" and secure Government communications. The economic potential of this infrastructure to create a leading digital economy cluster is evident within the area and is one of the key growth sectors that can be supported by enhanced corridor connectivity.

## **Primary Research Centres & Universities**

- 6.68 In addition to the primary employment sectors the Western Gateway area is home to many world class research centres and universities. These make a significant contribution to the economy as well as enhancing the reputation of the area. Centres include:
- Arts University Bournemouth

- Bournemouth University
- Bristol University
- University of the West of England
- Bath University
- Bath Spa University
- University of Gloucestershire – campuses in Cheltenham and Gloucester
- Royal Agricultural University in Cirencester
- Hartpury College and University Centre, north west of Gloucester
- Centre for Environment, Fisheries and Aquaculture Science, Weymouth
- Bristol Robotics Laboratory
- FutureSpace
- SETSquared (Bristol & Bath)
- Bristol & Bath Science Park
- National Composites Centre
- The Dyson Institute
- Food Works SW

### **Economic Summary**

- There are four LEP's in the Western Gateway area;
- With the exception of the Swindon and Wiltshire LEP where Swindon is a member of the England's Economic Heartland Sub-National Transport Body there are no deviations in the boundaries of LEP areas and the Western Gateway area;
- At a national level the highest employment rates for Travel to Work Areas were generally observed in the South East and South West;
- Western Gateway area supports over 1.6 million jobs;
- Bristol and South Gloucestershire provide the largest number of jobs in the Western Gateway area equating to approximately 28% of all jobs in the area;
- The two city regions of the West of England and Bournemouth, Christchurch and Poole provide 53% of the Western Gateway Areas jobs;
- Travel to work data identifies the importance of working with neighbouring areas especially: Hampshire, Somerset, Swindon, Wales and Worcestershire;
- A function of transport is to support economic growth by enabling key employment sectors to thrive. The role for transport in this context is two fold: ensure there is sufficient capacity in the transport network to enable employees to get to work; and that goods can be transported to facilitate supply chains using good quality reliable strategic networks;
- ONS data also shows that not only do certain areas in the Western Gateway lag behind other areas with respect to productivity but that also that the 'productivity gap' has been widening over time; and
- Without intervention on the strategic corridors, this gap is likely to widen further over time.

## 7.0 Local Transport

### Introduction

- 7.1 This section summarises the strategic transport issues outlined in the existing Local Transport strategies that cover the Western Gateway area. Four transport strategies cover the Gateway area including ones for: Gloucestershire, Wiltshire, and two joint plans covering Bournemouth, Poole and Dorset and the West of England including Bath and North East Somerset, Bristol City, North Somerset and South Gloucestershire.

### Summary of existing transport strategies

- 7.2 The **Bournemouth, Poole and Dorset joint Local Transport Plan** (LTP) was adopted in 2011. The LTP vision for 2026 is *'A safe, reliable and accessible low carbon transport system for Bournemouth, Poole and Dorset that assists in the development of a strong low carbon economy, maximises the opportunities for sustainable transport and respects and protects the area's unique environmental assets'*.
- 7.3 The LTP was informed by the South East Dorset Multi Modal Transport Study. The latter is currently being refreshed and there is local awareness that a new approach to transport is required. The new approach recognises the importance of reduced dependency upon the car and creates more sustainable, low carbon, people-focussed places. It is anticipated that exploring innovative approaches to the urban transport challenges will include:
- Sustainable/Digital Transport Corridors; providing attractive, high-speed, direct bus connectivity and priority to outlying areas, and fibre to enable ITS/CAV/Smart City technology;
  - Cycle Highway Corridors; providing direct, safe and continuous cycle routes;
  - Transport Hubs Improvements; enabling easier transfer between transport modes; and
  - Technology; real-time traffic management co-ordination, comprehensive travel app enabling Mobility-as-a-Service (MaaS), electric bus infrastructure, connected-autonomous-vehicle (CAV) technology.
- 7.4 **Gloucestershire's** LTP was adopted in 2016 and is currently being reviewed to reflect the transport policies outlined in the recently adopted District led Local Development Plans. Within the existing LTP, transport is identified as an enabler of accelerated economic growth and is a key determinant of the quality of place. Gloucestershire's vision for transport is to deliver; *"a resilient transport network that enables sustainable economic growth by providing door to door travel choices"*.
- 7.5 The vision encapsulates the importance of journey time reliability and travel choice as the economy grows. It is important to move away from a culture where the car is the dominant mode of transport towards one where the car is one transport choice within a range of realistic travel options. For some residents it may not be feasible to have a full range of transport choices, but there may be a choice for part of their journey.

- 7.6 The integration of travel modes providing travel choices for door to door journeys is essential to manage congestion in urban areas. Information enables people to make decisions about how and when they travel. As technology advances during the plan period the county council will ensure travel information is provided in accessible, useful formats to raise awareness of, and confidence in using different travel options.
- 7.7 The **West of England Combined Authority (WECA)** was formed on the 1 March 2017 as the strategic transport authority in the West of England. A Joint Committee enables WECA and North Somerset Council to make decisions at the West of England Level. A Draft Joint Local Transport Plan 4 has been published has been subject to public consultation. It will cover the period up to 2036. The transport strategy seeks to address both current challenges including carbon reduction as well as the challenges presented by ambitious growth to 2036. Key objectives of the plan will focus on carbon reduction and economic growth. It will outline an ambitious major scheme programme, focussed on reducing car dependency and maintaining total car trips to current levels against a backdrop of forecast housing and employment growth.
- 7.8 **Wiltshire's** transport strategy is outlined within its Core Strategy. Within this plan the A350 strategic corridor is identified as requiring selective improvements to support planned development growth. It also includes a number of rail station improvements. Integrated transport packages have been identified in Chippenham, Trowbridge and Salisbury to help facilitate sustainable development growth. The packages will seek to achieve a major shift to sustainable transport by helping to reduce reliance on the private car and by improving sustainable transport alternatives.
- 7.9 The Swindon and Wiltshire LEP Strategic Economic Plan (January 2016) set out the following strategic objective and priority actions:
- Transport infrastructure improvements - we need a well connected, reliable and resilient transport system to support economic and planned development growth at key locations.

#### **Priority actions**

- Deliver key road junction and infrastructure improvements to support economic and planned development growth;
- Deliver a whole corridor approach to traffic management and maintenance on key routes to improve reliability and resilience;
- Deliver packages of integrated transport schemes to support the development and regeneration plans for Chippenham, Salisbury, Swindon and Trowbridge;
- Deliver rail capacity and connectivity improvements to support economic growth and help realise improved travel opportunities;
- Lobby Government to address the unreliability of north-south road connections in the sub-region to support development and business growth both across Swindon and Wiltshire, and in neighbouring LEP areas; and
- Lobby Government and work with Highways England, Network Rail, train operating companies and other key bodies to improve key strategic routes to the Midlands and

south coast ports, Cardiff, Bristol and the Thames Valley, London and South East, and South West.

### **Summary of existing transport characteristics and issues**

- 7.10 The Bournemouth, Christchurch and Poole conurbation has one of the largest populations for a non-mayoral city region in England. The area experiences significant increases to the population from year-round tourism with over 17 million day and overnight visitors each year. A recent study by Inrix, reported in the Times, indicated that the 'Bournemouth city area' (including Poole, Christchurch and some parts of East Dorset) is the 6th most congested in the UK and 2nd most congested non-mayoral English city region. The economic cost of this congestion is estimated at £276m p.a.
- 7.11 The local transport network is inhibiting productivity growth. The city region has an estimated productivity gap of £1.5bn p.a. compared to the UK average. Population growth of 9.8% over the past 10 years (16.2% within Bournemouth) is rapidly exacerbating the transport problems.
- 7.12 Geographically, the conurbation is constrained by the coast to the south, and the River Stour to the north resulting in pinch points at river crossings and no scope for an orbital route. These constraints are further exacerbated by limited access to the Strategic Road Network resulting in the local highway network having to accommodate high levels of strategic traffic, leading to; unacceptable levels of congestion, unreliable journey times, severance and air quality issues in local centres.
- 7.13 Transport challenges include:
- Multi-centred, high car dependant conurbation with increasing traffic congestion and little opportunity for expansion or development of new road routes. Low traffic speeds and increasing journey times on the main approaches to the conurbation, particularly on the main corridors in the peak periods (e.g. A31, A338, A35, A348, and A3049);
  - Poor connections to the national strategic road network, with unreliable journey times, and relatively slow rail journey times to London, seriously affecting economic performance.
  - Very poor quality transport links by road and rail to the north, the greater Bristol area and the wider South West;
  - The key strategic A31 route is often at capacity around the AM and PM peaks and during the summer high season. This is particularly problematic on both sides of the Ringwood and on the Wimborne and Ferndown bypasses; and
  - Large number of strategic east/west movements and lack of orbital routes.
- 7.14 Dorset experiences poor strategic connectivity especially on north-south routes, but also on the east-west axis. Network resilience is a major concern and any incident on one of major corridors can have strategic impacts with limited routes alternatives. Rail overcrowding is also an issue on the Heart of Wessex line, which affects links to Weymouth and Dorchester. This is further accentuated by the low service frequency.



- 7.15 There is localised congestion in South East Dorset and on the Weymouth/Dorchester corridor which impacts on strategic traffic on the A31/A35 at peak times. Seasonal fluctuations in travel demand impact resulting from tourist activity can also impact journey time reliability.
- 7.16 In general terms, Gloucestershire benefits from a relatively well connected and efficient highway network which represents an opportunity for local businesses to access a wider pool of labour, supply chains and business clusters. Furthermore, Travel to Work self-containment is high within the county.
- 7.17 There is a culture of high car dependency and usage in the county. Congestion is prevalent on the main corridors into Cheltenham and Gloucester, which is only expected to deteriorate in the future as new housing and employment are delivered. If unmitigated this will place increasing pressure on transport networks across the county and on strategic links to neighbouring areas. This will result in poor journey times and network saturation will have a detrimental impact on local business activity in the county and undermine its capacity to secure growth
- 7.18 Within the West of England – including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire. There is a culture of high car ownership and dependency resulting in acute traffic congestion, particularly during peak periods. Network capacity is constrained and very vulnerable to incidents, particularly on the Strategic Road Network. There are two major Air Quality Management Areas declared in central Bath and Bristol. In addition, consultations have taken place on proposed Clear Air Zones (CAZs) and the production of Clean Air Zone plans, intended to protect public health and reach compliant legal standards of harmful emissions from nitrogen dioxide, without negatively impacting transport options.
- 7.19 Growth of South Gloucestershire's North Fringe as a major employment area has resulted in dispersed trip patterns which are difficult to serve by public transport. Despite this, substantial investment in bus and rail infrastructure has reported increased patronage. The area also records high and growing levels of cycling and walking.
- 7.20 Motor vehicle miles travelled in Wiltshire continues to increase. However, growth in traffic has been unevenly distributed. Many roads in the south of the county have seen static or declining traffic trends, the exception being the A303. In contrast roads in the north of the county have reported large increases in use (A350, and the A429 between the M4 and Malmesbury).
- 7.21 In spite of the rural aspect of the county, the concentration of residents in fairly compact rail-served settlements gives a surprisingly high measure of rail accessibility resulting in rail patronage doubling from 1997. The county is well-connected with London at Chippenham (2 trains per hour), Salisbury (2 trains per hour) and rather less so at Westbury (irregular service). Overcrowding is commonplace on the Southampton-Bristol corridor and the main east-west routes. The introduction of new bi-mode trains on the Paddington-Bristol route is easing capacity problems on this corridor; cascaded diesel trains are also providing increased capacity between Westbury and Bristol.

7.22 The transport challenges in the area include:

- None of the main north-south road connections in the wider sub-region are fit for purpose and the increasing unreliability of these routes is significantly constraining business and development growth;
- In Salisbury, there are capacity issues on the A36 Southampton Road which is a key gateway into the city;
- The regeneration of Swindon town centre and the significant development growth planned in Chippenham, Salisbury and Trowbridge need to be supported by improved local transport systems to help create more sustainable settlements; and
- Rail connections are being compromised by a lack of key infrastructure.

**Summary of forecasted growth**

- 7.23 Bournemouth, Christchurch and Poole - Strategic transport modelling for the Poole Local Plan forecast that from 2012 to 2033, the number of vehicle trips in Poole will increase by 36%. Average vehicle speeds are forecast to fall significantly and over capacity queueing forecast to increase sharply. The inability to transport goods and personnel efficiently due to congestion is having a major detrimental effect on productivity. It is paramount to reduce car use and manage the network more effectively. Previous transport studies highlighted areas such as Wimborne and Ferndown as having poor bus and cycling connectivity leading to an overdependence upon cars coming into the heart of the city region, resulting in congestion. Addressing these key transport corridors into and out of Bournemouth, Poole and Christchurch is therefore a priority.
- 7.24 Dorset - Projected growth on the Weymouth-Dorchester corridor will lead to capacity issues at key junctions on the A354. This will exacerbate existing problems on the Dorchester bypass, although development at North Dorchester and the associated link road through that development may assist here.
- 7.25 Gloucestershire – The focus of growth along the M5 corridor will increase the incidences of traffic queueing back on to the ‘main line’ of the motorway on a regular basis, especially at junctions 9, 10 and 11. Investment is required to help to tackle existing problems in terms of safety and resilience. Beyond 2031, the M5 corridor is likely to be placed under further stress and will require additional, and substantial, investment as part of wider transport improvements in the corridor, in order to facilitate both strategic north-south movement and to serve the growing economy locally within the county.
- 7.26 West of England – including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire - Over 60% of commuter trips are undertaken by car. The Joint Transport Study (completed in October 2017) identified an £8bn investment requirement to hold car commuting trips to current levels against a backdrop of forecast housing and employment growth up to 2036.
- 7.27 Forecasts developed for the Joint Transport Study indicate that congestion will rise significantly over the next 20 years. The G-BATS4 model estimates that the costs of congestion on the road network in the West of England will rise from an estimated £300

million per annum in 2013 to £800 million per annum in 2036. A significant component of this congestion will be experienced on the Strategic Road Network, which will impact on both local and longer-distance movements in the area.

- 7.28 Indicative Forecasts identify that there could be growth of around 40% in goods vehicles between 2013 and 2036, which is due to several factors including changes in the logistics industry and increased numbers of home deliveries. This will create significant congestion and air quality problems, particularly within Bristol. Action will need to be taken to reduce the number of HGVs in Bristol, particularly the city centre, and a new approach to freight management will be required.
- 7.29 A Highways England and Welsh Government report concluded that removing the Bridge Tolls on the M4 and M48 would increase traffic flows over the Severn Crossings by around 31% by 2024. This is likely to decrease operational capacity at the Almonsbury Interchange (M4/M5) and at the A48 in Chepstow.
- 7.30 Wiltshire – As part of the Local Plan 2036 Review, Wiltshire Council has commissioned a Wiltshire-wide variable demand model. Outputs are expected later in 2019. In the absence of this data the National Traffic Forecast (2018) gives a wide range of traffic growth for the South West Region dependent upon the scenario chosen; by 2035 the growth ranges from 7% to 23% or 0.3% to 1.2% annually. Light goods vehicles are expected to continue recent rapid growth trends while HGV mileage is fairly stable. Population is a significant external driver of traffic growth. Trend-based projections for Wiltshire population suggest a 12% increase by 2035. Network Rail's Regional Market Study of 2013 forecast growth of between 22%-111% by 2043 for the Bristol area network excluding growth caused by service enhancements. While this demand growth provides opportunities for the development of new rail services this is difficult to achieve when network pinch-points limit the availability of additional route capacity.

#### Summary of Transport Strategy themes

- The area has a high dependency on car ownership and car use;
- Network capacity constraints have resulted in a number of strategic corridors experiencing congestion, which has had a negative impact on productivity and the local environment;
- As the economy grows, journey time reliability and choice will be critical in travel decisions;
- Population is a significant external driver of traffic growth;
- The impact of planned growth must be managed to reduce its impact;
- The rate of expected travel growth within the south west is between 0.3% and 1.2% annually;
- Growth is not evenly distributed and will negatively impact a number of strategic travel corridors;
- It is paramount to reduce car use and manage the network more effectively;
- There is awareness that a new approach to transport is required that reduces dependency upon the car and creates more sustainable, low carbon transport network;
- There is a need for improvements to public transport corridors. Investment in bus networks to address urban issues and rail network to address Sub-national issues;
- There is limited access to the Strategic Road Network in the south and capacity constraints throughout the area which impacts network resilience; and
- Demand for new rail services need to be matched by infrastructure investment to remove pinch-points on the network to provide additional route capacity.

## **8.0 Enhanced Productivity**

### **Introduction**

- 8.1 With productivity levels being a concern both at a national level and within many parts of the Western Gateway area, the ability of enhanced strategic travel through corridor connectivity to boost productivity is an important factor.
- 8.2 Enhanced connectivity generates economic benefits by increasing workers' mobility and by enabling businesses to draw on a wider pool of labour, especially if this larger pool of labour also has higher skills levels and higher qualifications.
- 8.3 This is the theory that underpins agglomeration – e.g. in areas where there is good connectivity between workers and jobs, higher levels of GDP per worker arise as workers are more productive when they have good access to a wide range of jobs.
- 8.4 Based on DfT WebTAG guidance on agglomeration improvements, transformative changes in generalised travel costs will improve GDP per worker. As an example of how this process works in several parts of the Western Gateway, those living in relatively sparsely populated areas will gain much better access to a range of employment opportunities in centres of economic activity once key corridors are improved. In addition, corridor improvements in the more urbanised areas (such as the Bristol conurbation) will also generate agglomeration benefits given that the potential to improve GDP per worker in these areas is high.
- 8.5 The Western Gateway area is also ideally suited to agglomeration improvements given that several Functional Urban Regions (FURs) are located in the area. The FURs consist of 'core' centres of economic activity and together with the 'hinterlands' surrounding these core areas, there are several across the Western Gateway area.
- 8.6 The FURs cover the Bristol and Bournemouth / Poole conurbations. The strategic connectivity improvements will also provide important connectivity to other FURs in the UK, including those in South Wales, Berkshire, the West Midlands, Oxfordshire and those in the South West (such as the FURs centred around Exeter and Plymouth).

### **Additional GVA from new employment**

- 8.7 There are many employment sites that are proposed throughout the Western Gateway area. These range from strategic sites comprising in excess of 20 hectares of land through to a large number of smaller sites with areas greater than 5 hectares but less than 20.
- 8.8 Assuming an even distribution across different types of employment (e.g. office-based, industrial / business park and warehousing / distribution), this will support over 170,000 new jobs. Based on GVA per employee across all of the Western Gateway area, this is equivalent to additional GVA of £8.7 billion.
- 8.9 Even before the impact of improved strategic connectivity is taken into account, this illustrates the potential gain that could be achieved across the Western Gateway area at a time when many parts of the STB are seeking new employment opportunities.

- 8.10 Enhancement of the strategic connectivity in the Western Gateway will increase the viability of these new employment sites as investors and businesses are far more likely to create new employment opportunities if each site has improved connectivity.
- 8.11 If the Western Gateway is to achieve its full potential with respect to the new employment sites, much improved strategic connectivity is essential if this is to be achieved - and also achieved within accelerated timescales.

#### **Land value gains from housing**

- 8.12 The need for new housing across the Western Gateway area is important for the following reasons:
- It will enable workers to live and work in the STB area rather than consider re-locating to other regions (and thus depriving the STB area of crucial economic activity and growth); and
  - where affordable housing is provided, this will enable people to afford suitable property, remain in the Western Gateway area and access employment in the main economic centres (e.g. Bristol, Cheltenham, Gloucester, Salisbury and Bournemouth / Poole)
- 8.13 Enhanced connectivity will help to unlock new housing sites (due to transport constraints being lifted) and as stated in Local Plans across the STB many new housing developments have been allocated, but are unlikely to be developed without the transport constraints being removed.
- 8.14 The scale of the proposed housing developments across the Western Gateway area is illustrated by the large number of new units that are planned (**Figures 14 and 15**). These strategic sites total over 133,000 units comprising over 59,000 units at 10 larger locations across the STB area and over 73,000 units across 40 smaller sites distributed throughout the Gateway.

#### **Helping to “Rebalance the Economy”**

- 8.15 In November 2017, the Government published its Industrial Strategy White Paper where it set out its objective to ‘rebalance the economy’ with transport being a key facilitator of this.
- 8.16 The DfT published its ‘Rebalancing Toolkit’ in December 2017 and this sets out a range of topics that need to be addressed so that the overall UK economy can be ‘rebalanced’ away from reliance on the dominant London and South East economy.
- 8.17 The Western Gateway STB potentially has a major role to play in supporting this economic rebalancing through the development of its Strategic Transport Plan. The plan would identify the strategically important transport investment priorities required to support the Gateway areas economic base, which if sufficiently exploited, could help achieve the Government’s objective of shifting economic reliance away from the London and the south east.

### Economic Connectivity Study

8.18 A comprehensive economic study has been produced using Highways England's South West Regional Transport Model (RTM). A full copy of this study is provided in **Appendix A**. This study includes a set of quantifiable metrics linked to 15 strategic travel corridors within the Gateway area. These include:

- Increased productivity due to better connectivity on each corridor;
- Increased GVA from employment at the new employment sites planned across the Western Gateway area; and
- Land value gains from unlocked housing at new housing sites across the area.

### Summary of Enhanced Productivity

- The Western Gateway area covers some of the country's most prosperous, fast-growing conurbations;
- Although the STB contains these centres of economic activity, the Western Gateway has several areas and communities that experience poor transport connectivity, especially with respect to corridor connectivity;
- By transforming connectivity, there will be significant productivity gains as existing workers will be able to produce more GVA per employee;
- The Western Gateway area is also ideally suited to agglomeration improvements given that several Functional Urban Regions are located in the area;
- Planned employment sites being delivered could support over 170,000 new jobs. Based on GVA per employee across all of the Western Gateway area, this is equivalent to additional GVA of £8.7 billion;
- If the Western Gateway is to achieve its full potential with respect to the new employment sites, much improved strategic connectivity is essential if this is to be achieved - and also achieved within accelerated timescales;
- Enhanced connectivity will help to unlock new housing sites (due to transport constraints being lifted); and
- The Western Gateway STB has a major role to play in this rebalancing as it offers a unique set of economic opportunities that if sufficiently exploited, can help achieve the Government's objectives of rebalancing the economy.

## 9.0 Environment

### Introduction

- 9.1 Transport contributes to a significant proportion of the UK's carbon emissions. This is an important issue to consider in light of the climate emergency declarations and an issue that needs to permeate through our proposed delivery programme.

### Carbon Management in Infrastructure

- 9.2 Reducing carbon emissions associated with infrastructure is fundamental to addressing the global challenge of climate change, either directly through its construction, operation and maintenance of infrastructure asset or indirectly through the users of the infrastructure.
- 9.3 Leadership is recognised as a key enabler of carbon management in infrastructure. Despite the Western Gateway not being responsible for the delivery of infrastructure it is critical to recognise the importance of reducing carbon emissions where possible. This could either be through the construction process or through the Strategic Transport Plan which will identify schemes to increase use of non-car modes and adoption of low carbon solutions for strategic journeys.
- 9.4 The information provided in **Figure 9.1** has been taken from PAS 2080:2016. It provides a summary of how transport contributes towards carbon emissions.

**Figure 9.1 – Transport's contribution towards global carbon emissions (PAS 2080:2016).**

Capital	Operational	User
Infrastructure covering all road, rail, aviation, and marine /inland water modes	<ul style="list-style-type: none"><li>• Energy for street and public realm lighting</li><li>• Energy for pumps, control and automation systems, signage, signalling etc.</li><li>• Other energy related emissions and operational processes necessary for the operation and management of transport assets</li><li>• Energy and fuel use by vehicles (road, aviation, water and rail) that are owned and operated by asset owners/managers and/or operators providing transport services on the infrastructure</li></ul>	Energy and fuel use by user owned vehicles (road, aviation, water and rail)

### Landscape designations

- 9.5 Many protected sites are vulnerable to development and transport has the potential to cause habitat decline due to fragmentation of habitats by linear infrastructure and air pollution.

- 9.6 The National Planning Policy Framework (2018) states that planning policies and decisions should contribute to and enhances the natural environment by protecting and enhancing valued landscapes in a manner commensurate with their statutory status.
- 9.7 The Western Gateway area is home to a range of different landscape designations. These character types contribute to the planning of development and decision making about land use. At a strategic level the Gateway area includes the following designations:
- 3 – World Heritage Sites - City of Bath, Jurassic Coast and Stonehenge and Avebury;
  - 1 - National Park – New Forest; and
  - 6 - Areas of Outstanding Natural Beauty (AONB) – Dorset AONB, Cranborne Chase and West Wiltshire Downs AONB, Cotswold AONB, Wye Valley AONB, Malvern Hills AONB & Mendip Hills AONB

### **Flooding**

- 9.8 Flooding is an issue across the Western Gateway area which can impact transport connectivity.
- 9.9 Bournemouth, Christchurch and Poole:
- Surface water flooding from flash flood events is a significant problem along key corridors which follow natural contour boundaries;
  - Poole and Christchurch centres are at risk of sea level rises along the respective quaysides; and
  - The South West Mainline in Poole and the Holes Bay Road area are at risk from sea level rise and tidal flooding.
- 9.10 Dorset: There are a number of locations where flooding may result in temporary closure and diversions, possibly for several days including:
- A35 Dorchester bypass;
  - A35 Bridport, Chideock and Charmouth (surface flooding issues);
  - Heart of Wessex line at Wrackelford;
  - A37 Ash Hill; and
  - A37 South of Yeovil and Heart of Wessex line.
- 9.11 Gloucestershire:
- Surface water flooding is a risk in the most built up areas of Cheltenham, Gloucester and Stroud;
  - Areas along the Severn estuary are prone to tidal flooding and the upper Severn and its tributary rivers in the north west of the county are prone to fluvial flooding. Fluvial flooding affects Tewkesbury, Cheltenham and Gloucester. Defences along the Severn estuary have mitigated the risk of the Severn coming overbank but tributary rivers now provide higher risk of flooding; and



- Climate change is likely to exacerbate flooding in Gloucestershire, particularly in the relatively low-lying Central Severn Vale area and pressure to provide more new housing means new housing developments are being built on land vulnerable to flooding.
- 9.12 West of England – including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire:
- Several locations in the West of England are vulnerable to flooding from the sea (storm surges) and/or rivers and surface water. The key issue in strategic transport planning is the vulnerability of the transport network to predicted increases in storms and flooding events.
- 9.13 Wiltshire - There are a number of locations where flooding may result in temporary closure and diversions, possibly for several days including:
- M4 - Surface water flood risk near Junction 16 (Royal Wotton Bassett) & Junction 17;
  - A303 Surface water risk east of Mere and around Chicklade;
  - A36 - Surface water risk around Deptford interchange, Alderbury and Landford;
  - Groundwater flood risk in area of Warminster and Salisbury;
  - A350 - Surface water risk near Yarnbrook, north of Westbury, Semley and East Knoyle. Groundwater flood risk throughout Melksham and Warminster; and
  - Salisbury is likely to have the highest risk of prolonged disruption because of flooding.

### **Air Quality**

- 9.14 Vehicle emissions have a direct impact on the air quality. Outdoor air quality across the Western Gateway area is generally good however there are Air Quality Management Areas (AQMA) declared at a number of locations due to exceedances in the allowed annual mean NO<sub>2</sub> level (at 40µg/m<sup>3</sup>).
- 9.15 Several of the AQMA coincide with neighbourhoods within the 10% most deprived in the county and the 10-20% most deprived in terms of health deprivation in the country. Public Health England estimate 5.3% of deaths of those over 30 in England is attributable to particulate air pollution.
- 9.16 Bournemouth, Christchurch and Poole – AQMA:
- Commercial Road, Parkstone, Poole (on the A35 Poole to Christchurch corridor);
  - Ashley Road B3061, Poole; and
  - Cooper Dean Roundabout, Bournemouth (on the A3060 North Poole/North Bournemouth corridor).
- 9.17 Dorset – AQMA:
- A35 (SRN) Chideock West Dorset; and
  - Dorchester Town Centre.
- 9.18 Gloucestershire AQMA:

- A417 (SRN) Air Balloon Roundabout;
- Lydney Town Centre;
- Tewkesbury Town Centre;
- Cheltenham Borough;
- Priory Road – Gloucester;
- Painswick Road – Gloucester; and
- Barton Street – Gloucester.

9.19 West of England – including Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire AQMAs

- Bath;
- Bristol
- Cribbs Causeway;
- Farrington Gurney;
- Keynsham;
- Kingswood;
- Saltford;
- Staple Hill; and
- Temple Cloud.

9.20 The West of England—has the following Clean Air Zones:

- Bath;
- Bristol; and
- Hambrook Crossroads.

9.21 Wiltshire:

- Salisbury AQMA (including A36 Churchill Way);
- Wilton Road AQMA (including section of A36);
- London Road AQMA (including section of A30);
- Bradford on Avon AQMA (including section of A363);
- Devizes AQMA (including section of A361);
- Marlborough AQMA (including section of A346 and A4);
- Westbury AQMA (including section of A350); and
- Calne AQMA (including section of A4).

**Summary of Environmental Issues**

- Reducing carbon emissions associated with infrastructure and transport propulsion is fundamental to addressing the global challenge of climate change;
- New infrastructure can have significant effects on the natural landscape and thus consideration must be given to the natural and built landscapes when planning new infrastructure;
- The Western Gateway area is home to a range of different landscape designations including: 3 – World Heritage Sites, 1 - National Park – New Forest, and 6 - Areas of Outstanding

Natural Beauty;

- The key issue in strategic transport planning is the vulnerability of the transport network to predicted increases in storms and flooding events;
- Flooding is an issue across the Western Gateway area which can impact transport connectivity;
- Climate change is likely to exacerbate the number of flooding incidences (surface water flooding, sea level rises, tidal flooding); and
- Outdoor air quality across the Western Gateway area is generally good however there are Air Quality Management Areas in place at a number of locations.

## 10.0 Emerging Strategy Objectives

### Introduction

- 10.1 The summary information provided within the Story of Place section of the REB has been used to inform a SWOT analysis of the Western Gateway area. This information is provided in **Figure 10.1** and has informed our emerging strategy objectives.
- 10.2 The areas strengths that need to be maintained include: a growing population; a high level of employment including in several innovative/growth sectors; certainty in planned growth; and the high quality environment.
- 10.3 The areas opportunities that need to be exploited include: the growth of Bristol; the importance of improving north-south connectivity; and the awareness that a new approach to transport is required.
- 10.4 The areas weaknesses that need to be reversed include: poor connectivity to Bristol Airport; existing network capacity constraints; limited access to the Strategic Road Network in the south; and the need for more rail infrastructure investment.
- 10.5 The threats that need to be managed include: an aging population; congestion in urban centres where they impact Sub-national connectivity; reducing car use and network resilience issues caused by the impacts of climate change.

### Understanding the transport challenges

- 10.6 From reviewing the evidence presented in this document there are a wide range of transport challenges facing the Western Gateway area, both in terms of intra-urban and inter-urban travel. Whilst some issues are particular to local areas, there are a number of consistent themes across the area. In particular:
- Car ownership (and dependency) is generally high, both in more rural areas and in the main urban centres. This reflects factors such as diversity of travel patterns, including to employment locations on urban fringes, and poor rail connectivity in some locations.
  - This high car dependency, and the seasonal tourism-related demand experienced in many parts of the Western Gateway Area, results in a large spike in demand for travel by car during the year. In many locations, both urban and inter-urban, this results in traffic congestion, delays and journey time unreliability which impact quality of life (especially air quality) and the productivity of local businesses.
  - As the population and number of jobs in the area increase, without intervention these issues are expected to become more severe, and will constrain the ability of local authorities to provide the access and capacity necessary to unlock the area's housing and employment growth zones.
  - North-South inter-urban road connectivity across the area is poor; inhibiting positive agglomeration effects between the two key growth areas in the area. East-west connectivity for those areas close to the south coast is also poor, in part due to the impacts of congestion on the A31/A35 corridor. Strategic road connectivity beyond this corridor, to the north and

east can also be affected by significant congestion and unreliability. The SRN, and key local roads, lack resilience in the face of congestion or unplanned events.

**Figure 10.1 - SWOT Analysis of Western Gateway area**

<p><b>Strengths</b></p> <p>Population</p> <ul style="list-style-type: none"> <li>The rate of population growth forecast to 2041 is higher when compared to England as a whole</li> <li>The proportion of working age is consistent with that of England as a whole</li> </ul> <p>Connectivity</p> <ul style="list-style-type: none"> <li>15 strategic travel corridors have been identified</li> <li>Planned growth</li> <li>Each area has an adopted local plan – providing long-term certainty on locations of future growth</li> </ul> <p>Economic Strategy</p> <ul style="list-style-type: none"> <li>Western Gateway area supports over 1.6 million jobs</li> <li>The highest employment rates for Travel to Work Areas were generally observed in the South East and South West</li> <li>Bristol and South Gloucestershire provide the largest number of jobs</li> <li>The two city regions provide 53% jobs</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>The Western Gateway area is home to a range of different landscape designations including: 3 – World Heritage Sites, 1 - National Park – New Forest, and 7 - Areas of Outstanding Natural Beauty</li> </ul>	<p><b>Weaknesses</b></p> <p>Connectivity</p> <ul style="list-style-type: none"> <li>Travel times to London by rail vary considerably</li> <li>Connectivity is a major issue for Bristol airport</li> <li>Local Plan time horizons vary</li> </ul> <p>Economic Strategy</p> <ul style="list-style-type: none"> <li>Swindon and Wiltshire LEP is split between 2 SSTB areas - Swindon BC is a member of the England's Economic Heartland STB</li> </ul> <p>Planned Growth</p> <ul style="list-style-type: none"> <li>Growth is not evenly distributed and will negatively impact a number of strategic travel corridors</li> </ul> <p>Transport</p> <ul style="list-style-type: none"> <li>The area has a high dependency on car ownership and car use</li> <li>Network capacity constraints have resulted in a number of strategic corridors experiencing congestion</li> <li>There is limited access to the Strategic Road Network in the south</li> <li>Demand for new rail services need to be matched by infrastructure investment</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>The vulnerability of the transport network to predicted increases in storms and flooding events</li> </ul>
<p><b>Opportunities</b></p> <p>Population</p> <ul style="list-style-type: none"> <li>Bristol and surrounding areas are forecast to have the highest levels of population growth</li> </ul> <p>Connectivity</p> <ul style="list-style-type: none"> <li>Bristol is the most accessible urban centre in the Gateway area.</li> <li>East - West connectivity between urban centres on the south coast is good – although reliance and seasonal fluctuations are an issue</li> <li>Improving North - South Connectivity are vital to improve productivity</li> </ul> <p>Planned Growth</p> <ul style="list-style-type: none"> <li>Many of the local plans are undergoing reviews</li> </ul> <p>Economic Strategy</p> <ul style="list-style-type: none"> <li>There are four LEP's in the Western Gateway area</li> <li>Travel to work data identifies the importance of working with neighbouring areas</li> <li>As the economy grows, journey time reliability and choice will be critical factors in travel decisions</li> </ul> <p>Transport</p> <ul style="list-style-type: none"> <li>The rate of expected travel growth within the south west is between 0.3% to 1.2% annually</li> <li>Awareness that a new approach to transport is required that reduces dependency on the car and creates a sustainable low carbon transport network</li> <li>There is a need for improvements to public transport corridors. Investment in bus networks to address urban issues and rail network to address Sub-national issues</li> </ul>	<p><b>Threats</b></p> <p>Population</p> <ul style="list-style-type: none"> <li>The area has an aging population. By 2041 this will negatively impact the % of the working age population</li> </ul> <p>Connectivity</p> <ul style="list-style-type: none"> <li>If congestion is not managed in urban centres it will negatively impact Sub-national connectivity</li> <li>Due to the close proximity of larger airports and the relative ease of access there is a lot of passenger leakage to Birmingham and the South East airports</li> <li>It is important to ensure the Ports in the Gateway area are well connected to the national transport network to maintain their long-term viability</li> </ul> <p>Transport</p> <ul style="list-style-type: none"> <li>Population growth is a significant external driver of traffic growth – this additional demand must be managed to reduce its impact</li> <li>It is paramount to reduce car use and manage the network more effectively</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>Infrastructure can have significant impact on the natural landscape</li> <li>Flooding is an issue across the Western Gateway area which can impact transport connectivity</li> <li>Climate change is likely to exacerbate the number of flooding incidences (surface water flooding, sea level rises, tidal flooding)</li> <li>Air quality across the Western Gateway area is generally good however there are Air Quality Management Areas in place at a number of locations</li> </ul>

- Connectivity by road within urban areas can also be below-standard, as can connections between urban centres and the SRN, especially in the Bournemouth, Christchurch, and Poole City Region. Links from the SRN to the areas' international gateways are also poor.
- The quality of rail connectivity and services varies significantly for services within and beyond the area. Services to London from Bristol and parts of Wiltshire for example are good, but services are slow from the south coast. The quality of rail services within the area is also mixed. Some rail services also experience significant crowding issues due to lack of capacity, such as between Southampton and Bristol, and between Bristol and Weymouth.
- The quality of urban public transport is also very variable. However in general, urban bus services do not provide a sufficiently attractive alternative to the car; in particular due to the impacts of traffic congestion on journey times and reliability.
- The area benefits from a high-quality natural environment which must be protected. Investment in transport must seek to reduce the impacts of travel on the environment, including by reducing carbon emissions.

### Strategic approach to investment

- 10.7 Over the next year, the Western Gateway STB will commence development of the Strategic Transport Plan. This multi-modal plan, once produced, will demonstrate the economic benefit of improving strategic transport corridors. It will emphasise the importance of minimising adverse impacts of development to ensure an efficient, safe and resilient transport network. It will recognise the role of 'place' and the need to remove strategic traffic from local networks. Addressing shared transport challenges identified will be instrumental in creating high quality, vibrant and successful communities.
- 10.8 The plan will also set out a programme of research and initial sequenced programme of investment to deliver an agreed set of transport outcomes. The programme will propose investment in the strategic and local road networks (including the Major Road Network), and public transport networks to deliver benefits for drivers, passengers, freight, local communities and businesses in line with our objectives.
- 10.9 There is particularly strong potential for strategic transport improvement to act as a catalyst for productivity growth by linking the two city regions in the Western Gateway area. This reflects the fact that journey times and reliability between the West of England Combined Authority area and Bournemouth, Christchurch and Poole city region is currently poor, but also due to the locations of high tech clusters in these centres. This will be a key theme of our Strategic Transport Plan. **Figure 10.2** indicates the broad approaches we anticipate being at the heart of our strategy.

**Figure 10.2 - Indicative strategic investment approaches**

Strategic approach	Points of intervention					
	Rail services (TOCs & NR)	Urban public transport (incl. LLM)	Strategic Road Network (HE)	Major Road Network	Other local road network (non-MRN)	Local public transport operators
Improving the performance of regionally-important road and public transport corridors in city regions, including providing additional growth-enabling capacity	●	●		●		
Improving the performance and capacity of key inter-urban road and rail corridors with the Western Gateway area (including for freight)	●	●	●	●		
Improving strategic road and rail connectivity to locations beyond the Western Gateway area (including for freight)	●		●			
Improving access from key urban centres to/from the Strategic Road Network				●	●	
Improving local connectivity to international gateways within the Western Gateway area at Bournemouth, Poole, Portland and Bristol	●	●		●	●	
Harnessing technology to effectively manage the highway network and promote 'end-to-end' journeys by sustainable modes			●	●		●

### Vision and 'outcome objectives'

10.10 The STB is working to deliver strategic transport networks which meet the needs of the area today and beyond by facing known challenges; and which are 'fit for purpose' to deal with growing demand for travel in response to new jobs and homes. Our vision is for these networks to be:

- **high-performing:** to allow the Western Gateway area to achieve its economic potential;
- **sustainable:** to minimise adverse impacts of travel on communities and the environment of the future; and
- **resilient:** to unforeseen events and long-term changes in the economy and society.

10.11 With this in mind, draft objectives have been developed which describe the transport outcomes that the Western Gateway STB will be seeking from investing in the strategic transport network. These objectives also reflect the Government's four priorities for transport investment, as set out in the Transport Investment Strategy of:

- improving productivity and rebalancing growth across the UK;
- enhancing Britain’s global competitiveness by making it a more attractive place to invest;
- supporting the creation of new housing; and
- creating a transport network that works for all users, wherever they live.

10.12 These objectives also recognise the Government’s objectives for the MRN whilst ensuring the wider outcomes for the area are recognised in our general approach to strategy development. The final objectives will be agreed and finalised when producing the Strategic Transport Plan. The draft objectives are outlined in **Figure 10.3**.

**Figure 10.3 Draft Strategic Transport Plan objectives**

Transport outcome objective	Broader policy outcome	High-performing networks	Sustainable networks	Resilient networks
1. Low journey times and high journey time reliability on strategic road and rail linkages within the Gateway area	Productivity growth, greater integration between digital and innovation clusters, and creation of new high-value jobs	•		•
2. Strong connectivity within the Gateway area, for both north-south and east-west journeys	Support planned development and business growth, and improve access to international markets including ports and airports	•		•
3. High quality connectivity, and balanced capacity for managed growth in travel, to/from key employment centres in urban areas and elsewhere	Effective operation of labour markets and supply chains as well as improved tourism offer	•	•	
4. Minimised increase in non-car modes and adoption of low carbon solutions to strategic connectivity	Reduce greenhouse gas emissions and to improve air quality		•	
5. Improved reliability, safety and resilience of key road corridors	Support business productivity; improved quality of life	•		•
6. High quality access to the area’s international gateways	Improved business connectivity to international markets	•	•	
7. Appropriate transport modes to ensure high quality access to, development land, that is delivered in a way which supports positive place-shaping	Delivery of significant land for new homes and employment opportunities	•	•	



8. High quality strategic road and rail connections to key centres and international gateways outside the area	Support competitiveness of peripheral economies and productivity of the Gateway Area business trading with the rest of the UK	●		●
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# Regional Evidence Base

## Part 2

### Strategic Travel Corridors

