

System Operator

Planning a better network for you



West Sussex CMSP

Module 2: Market Study / Meeting Policy Objectives

James Hodgson, Economic Planner

Contents

Scheme objectives

DfT

Transport for the South East

Network Rail

Others

Next steps

Scheme objectives are vital

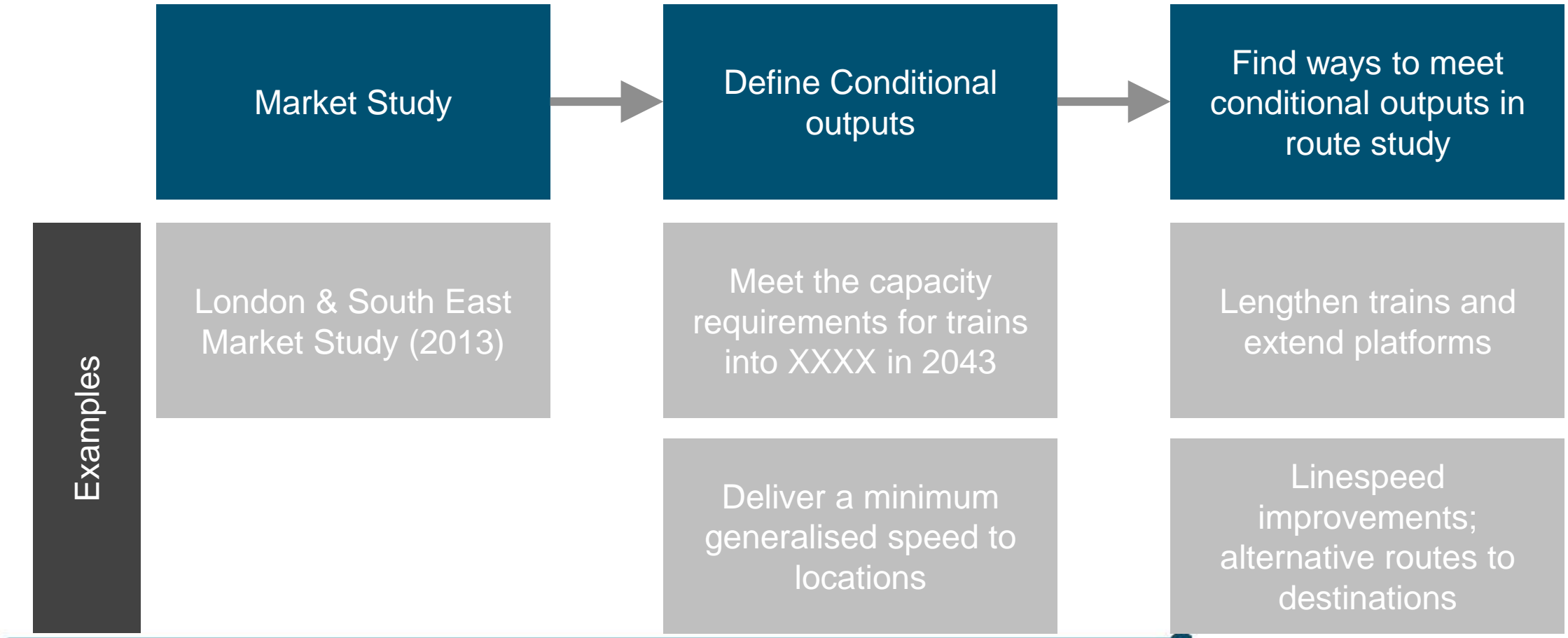
The importance of the business case

The Business Case provides a framework for scoping & planning spending proposals leading to efficient & effective spend

Cabinet Office – eight most common causes of project failure	
1.	Lack of clear link to the organisation's key strategic priorities
2.	Lack of clear senior management ownership and leadership
3.	Lack of effective engagement with stakeholders
4.	Lack of skills and proven approach to project and risk management
5.	Project not broken down into manageable steps
6.	Evaluation of proposals driven by initial price rather than long-term value for money (especially securing delivery of business benefits)
7.	Lack of understanding of and contact with suppliers
8.	Lack of effective integration between the client, supplier and supply chain

- Number 1 cause of failure: **Lack of clear link to the organisation's key strategic priorities**

What is the traditional role of a market study?



Conditional outputs are derived primarily from funders' objectives

L&SE Market Study (2013:p22)

This Market Study identifies the long term role of the London and South East passenger market in enabling the key priorities of current and potential future funders to be met. These statements of priorities are the strategic goals that the London and South East rail market should aim to meet in the long term.

Strategic goals are identified based on the aspirations of current and likely future rail industry funders. They are also developed through collaboration with industry partners and stakeholders and a review of existing literature. Conditional outputs are developed to meet these identified strategic goals."

What have we previously researched about this market?

Shorter distance journeys within the South East (L&SE Market Study, 2013:p52)

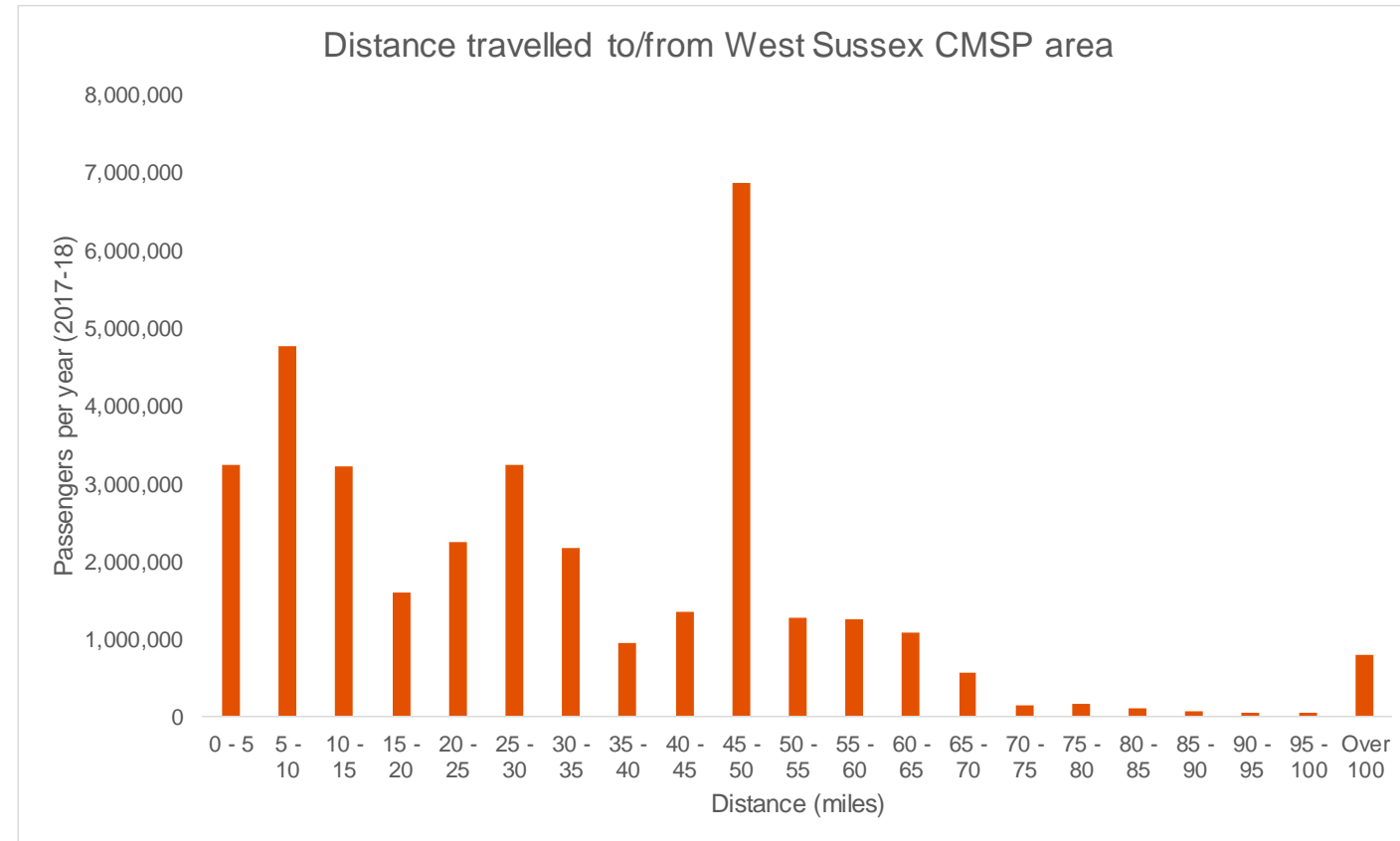
- The research indicates that, in contrast to the London markets, the largest benefits are generated here for quality of life and environmental impact.
- For large regional centres, significant economic benefits arise from increased business interaction when total journey times are under 60 minutes. Where possible, further improvements to journey times can yield additional significant economic benefits.
- Conditional outputs
 - 1. To accommodate peak demand.
 - 2. To provide incremental improvements to journey times.
 - 3. To provide a total journey time of less than 60 minutes.

Who are the key funders and stakeholders to define strategic goals?

- **Department for Transport**
 - Transport Investment Strategy
- **Transport for the South East**
 - Where does the West Coastway rank as a priority for investment?
- **NR South East Route**
 - CP6 Business Plan
- **Others?** (eg: Gatwick Airport; WSCC, etc.)
 - Franchise consultation

Brief overview of market

- Journeys per year:
 - 15.8 entirely within the West Sussex CMSP area
 - 15.6 journeys per year from West Sussex stations to Greater London
 - 11.5m journeys per year to other destinations
- Average distance travelled: 33.6 miles, but:
- Prominence of short-distance and 45-50 mile journeys (to London).



Contents

Scheme objectives

DfT

Transport for the South East

Network Rail

Others

Next steps

Department for Transport

Transport Investment Strategy – the four priorities

- (1) Create a transport network that works for users, wherever they live
- (2) Improve productivity and rebalance growth across the UK
- (3) Enhance our global competitiveness by making Britain a more attractive place to invest
- (4) Support the creation of new housing

<https://www.gov.uk/government/publications/transport-investment-strategy>

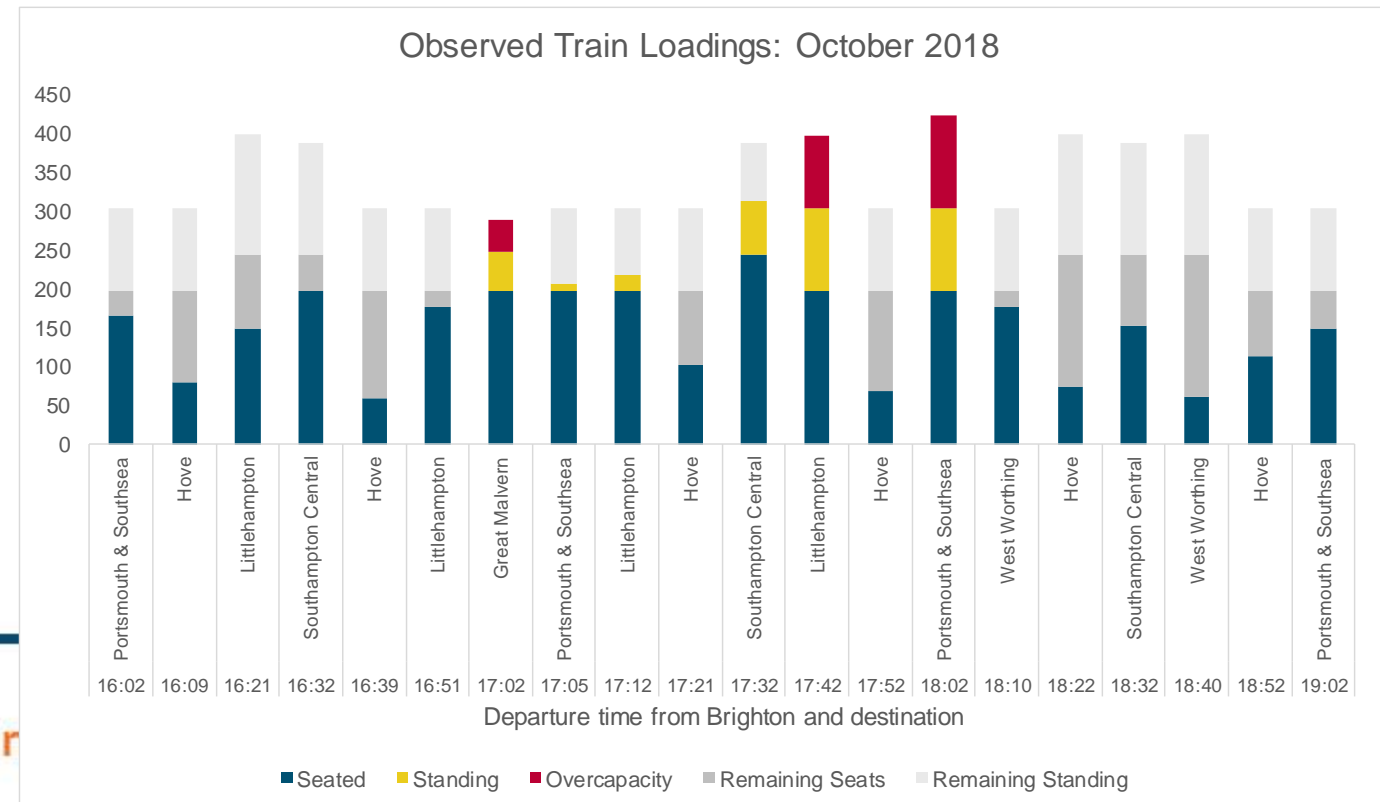
Key interpretations from the transport investment strategy

For this market:

- (a) Providing sufficient transport carrying capacity
- (b) Connecting communities with each other
- (c) Connecting communities and businesses with businesses
- (d) Catering for additional housebuilding

(a) Providing sufficient transport carrying capacity

- DfT capacity metrics are the same on West Coastway as into large cities:
 - Passengers should not stand for more than **20 minutes** in the peak only
 - Passengers should not stand beyond the **design standing capacity** of a train
- Capacity identified as a current constraint, particularly in evenings.
- Critical load point is in and out of Brighton.



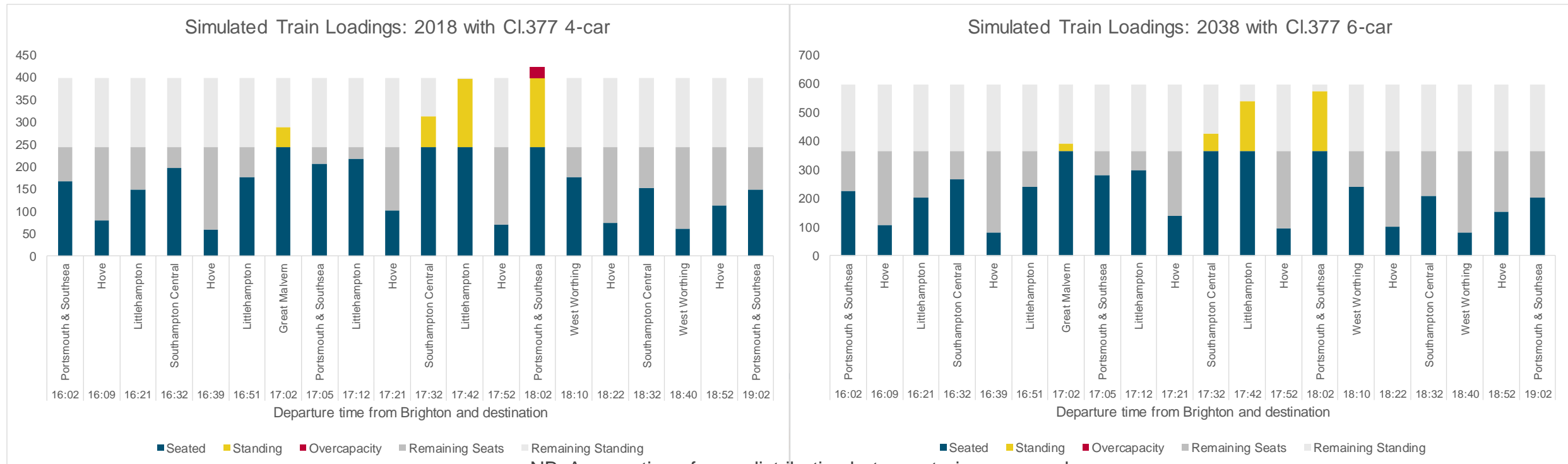
(a) Providing sufficient transport carrying capacity

- AM 3-hour growth into Brighton forecast over to growth at an average of **1.46%** over the next 20 years.
- Cumulative growth **33.5%**.
- Broadly in line with trend in London and the South East.
- Growth rates calculated by EDGE, DfT Software, which takes into account known housing allocations at a broader level.
- 20-year forecast in line with WebTAG final forecast year, rather than 2043.

Year period	Growth Rate	Cumulative growth by end year
2018-2023	1.48%	7.6%
2023-2028	1.69%	17.0%
2028-2033	1.60%	26.7%
2033-2038	1.06%	33.5%
2018-2038	1.46%	33.5%

(a) Providing sufficient transport carrying capacity

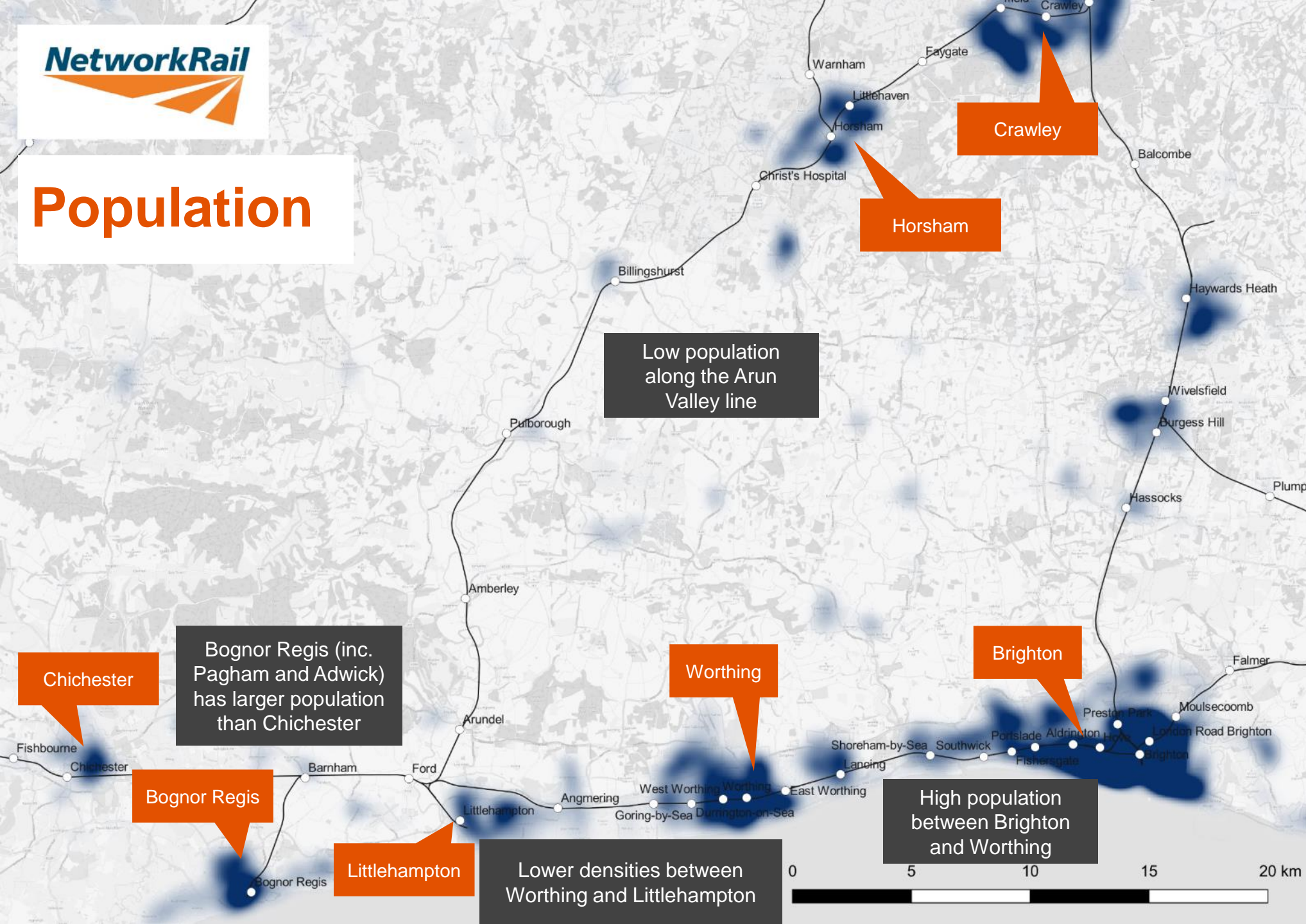
- Capacity challenge can largely be met with 4-car trains today
- Capacity challenge can be met with 6-car trains in 2038.
- Operational changes identified as a potential solution.



(b) Connecting communities with each other

- Where are the population centres along the route?
- Up to funders and stakeholders to define conditional outputs for connectivity between communities.

Population



Low population along the Arun Valley line

Horsham

Crawley

Brighton

Worthing

Bognor Regis (inc. Pagham and Adwick) has larger population than Chichester

Bognor Regis

Littlehampton

Lower densities between Worthing and Littlehampton



(c) Connecting communities and businesses with businesses

- Where are the population centres along the route?
- Up to funders and stakeholders to define conditional outputs for connectivity between communities.



Employment

Some Gatwick employment has not terminal-based or fits well with train schedules; rail mode share limited

Crawley and Gatwick Airport

Very large employment in Crawley and Gatwick.

Horsham

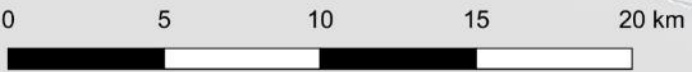
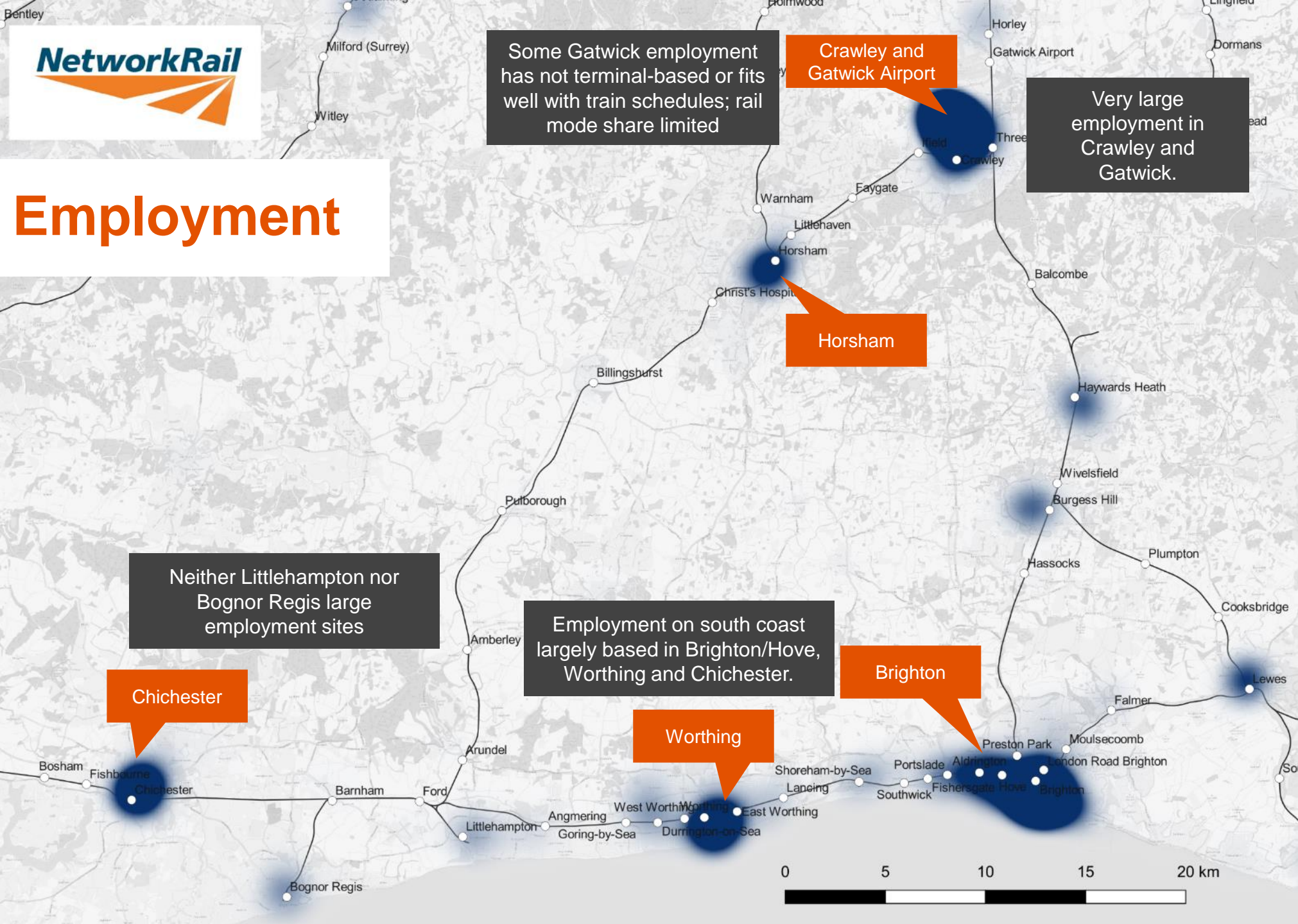
Neither Littlehampton nor Bognor Regis large employment sites

Chichester

Employment on south coast largely based in Brighton/Hove, Worthing and Chichester.

Brighton

Worthing



Expected population increase (GTR)



Expected housebuilding

Nutbourne, Bosham, Fishbourne

significant housing increase, especially Nutbourne,

Barnham huge increase of housing in what's locally called "the five villages"

Ford additional housing is expected to make Ford larger than Arundel mostly built on the former airfield

Littlehampton / Rustington / Angmering area huge increase in housing, together with realignment of A284 crossing the railway by bridge.

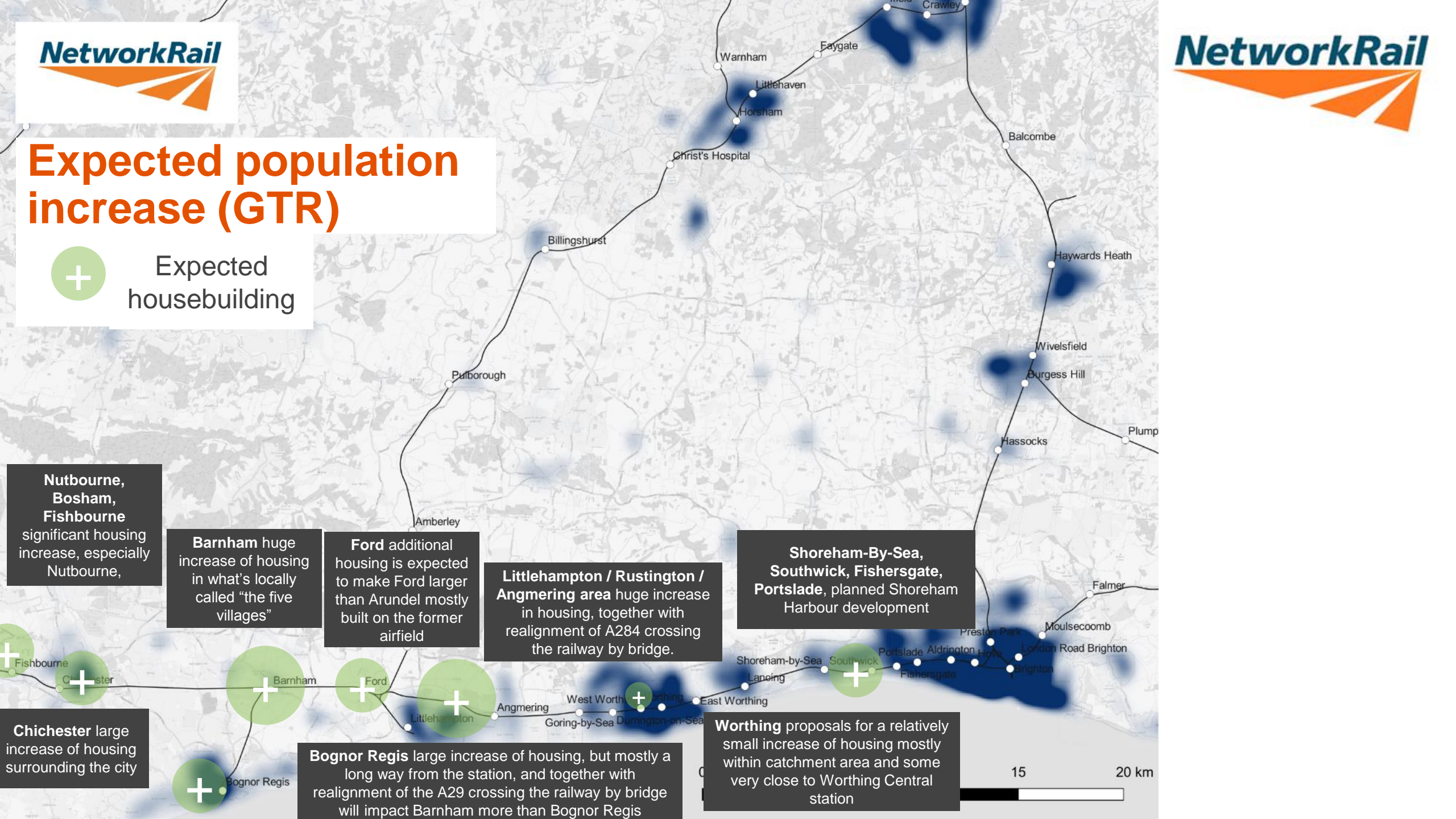
Shoreham-By-Sea, Southwick, Fishersgate, Portslade, planned Shoreham Harbour development

Chichester large increase of housing surrounding the city

Bognor Regis large increase of housing, but mostly a long way from the station, and together with realignment of the A29 crossing the railway by bridge will impact Barnham more than Bognor Regis

Worthing proposals for a relatively small increase of housing mostly within catchment area and some very close to Worthing Central station

15 20 km



Contents

Scheme objectives

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Transport for the South East

Network Rail

Others

Next steps

Economic Connectivity Review (July 2018)

- Four objectives
 - Building on the advantages of the South East for inward investment
 - Promoting access to international markets for trade
 - Enhancing the role of the South East as a pivot for the wider national transport system
 - Facilitating the development of a more sustainable approach to connectivity in the South East
- Assessed 22 strategic corridors on a multi-modal level

TfSE Corridors

- A27-M27/West Coastway Line ranks 3rd of 22

FIGURE 0.1: STRATEGIC CORRIDORS



TABLE 0.1: Sequencing of corridors

CORRIDOR	RANK
M25	1
M4/Great Western Mainline	2
A27-M27/West Coastway Line	3
M3/South Western Mainline	4
A23-M23/Brighton Mainline	5
A34/CrossCountry Manchester-Bournemouth	6
A2-M2/Chatham Mainline	7
A3/Portsmouth Direct Line	8
A2/Chatham-Ramsgate Mainline	9
A33/CrossCountry Manchester-Bournemouth	10
A229/Medway Valley Line	11
A20-M20/HS1	12
A259/East Coastway Line	13
A322-A329/North Downs Line	14
Redhill-Tonbridge Line	15
A22/Oxted Line	16
A25/North Downs Line	17
A299/Chatham-Ramsgate Mainline	18
A264/Arun Valley Line	19
A21/Hastings Line	20
A303/West of England Mainline	21
Herne Bay/Whitstable-Canterbury	22

you

Overall score

TABLE 9.4: SEQUENCING OF STRATEGIC CORRIDORS

CORRIDOR	ECONOMIC IMPACT		ENABLED BY TRANSPORT			REQUIREMENT AND FEASIBILITY		OVERALL	RANK
	BUSINESS CONNECTIVITY	LABOUR MARKET EFFICIENCY	INTERNATIONAL GATEWAYS	ENABLE DEVELOPMENT	DEPRIVED COMMUNITIES	TRANSPORT CONSTRAINTS	TRANSPORT POTENTIAL		
M25	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	1
M4/Great Western Mainline	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	2
A27-M27/West Coastway Line	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓	✓✓✓	3
M3/South Western Mainline	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	4
A23-M23/Brighton Mainline	✓✓	✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓	5
A34/CrossCountry Manchester-Bournemouth	✓✓	✓✓	✓✓✓	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	6
A2-M2/Chatham Mainline	✓✓	✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	7
A3/Portsmouth Direct Line	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓	✓✓	8
A2/Chatham-Ramsgate Mainline	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓	✓✓	9
A33/CrossCountry	✓✓✓	✓✓✓	-	✓✓	✓	✓✓✓	✓✓✓	✓✓	10
A229/Medway Valley Line	✓✓✓	✓✓✓	✓✓✓	✓	✓✓	✓✓✓	✓	✓✓	11
A20-M20/H51	✓✓	✓	✓✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓	12
A259/East Coastway Line	✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓	✓✓	13
A322-A329/North Downs Line	✓✓✓	✓✓✓	-	✓✓	✓	✓✓✓	✓	✓✓	14
Redhill-Tonbridge Line	✓	✓	✓✓	✓✓	✓	✓✓✓	✓✓✓	✓✓	15
A22/Oxted Line	✓✓	✓✓	✓	✓✓	✓✓	✓✓✓	✓	✓✓	16
A25/North Downs Line	✓✓	✓✓	✓✓	✓	✓	✓✓✓	✓	✓✓	17
A299/Chatham-Ramsgate Mainline	✓	✓	✓	✓✓✓	✓✓✓	✓	✓✓	✓✓	18
A264/Arun Valley Line	✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓	19
A21/Hastings Line	✓	✓	✓	✓	✓✓✓	✓✓	✓✓	✓	20
A303/West of England Mainline	✓✓	✓	-	✓	✓	✓	✓✓✓	✓	21
Heme Bay/Whitstable-Canterbury	✓	✓	✓	✓✓	✓	✓✓	✓✓	✓	22

- Ranked 3 of 22 routes overall
- Scores well on all measures other than transport potential

ark for you

Business Connectivity

- The Business Connectivity metric is a score of the impact of delay for business & freight traffic on a corridor
- Business market is split into sectors, and each sector qualitatively analysed for key corridors in detail (does not appear to feed into scores).
- Impact of highway delay per km per annum on business & freight travel calculated for each corridor, for present & 2041. Methodology in report does not match that in appendix.

Appendix method uses impact of minute of highway delay on business travellers (SERTM demand, TAG VoT). No mention of how business demand has been isolated.

- Impact of minute railway delay on business used for each corridor calculated using standard method (ORR ODM demand, TAG journey splits & VoT).
- Business Connectivity scores are said to derive from these calculations, but appear to disregard the railway impact (see Brighton Mainline's score for example).

Business Connectivity



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Labour Market Efficiency

- The Labour Market Efficiency metric is a score of the impact of delay for commuters on a corridor
- Similar method to Business Connectivity used for road, except for commuters rather than business users
- Method in report implies score derives from impact of delay per km of corridor per annum, for present & 2041
- No note paid to rail commuters

Labour Market Efficiency



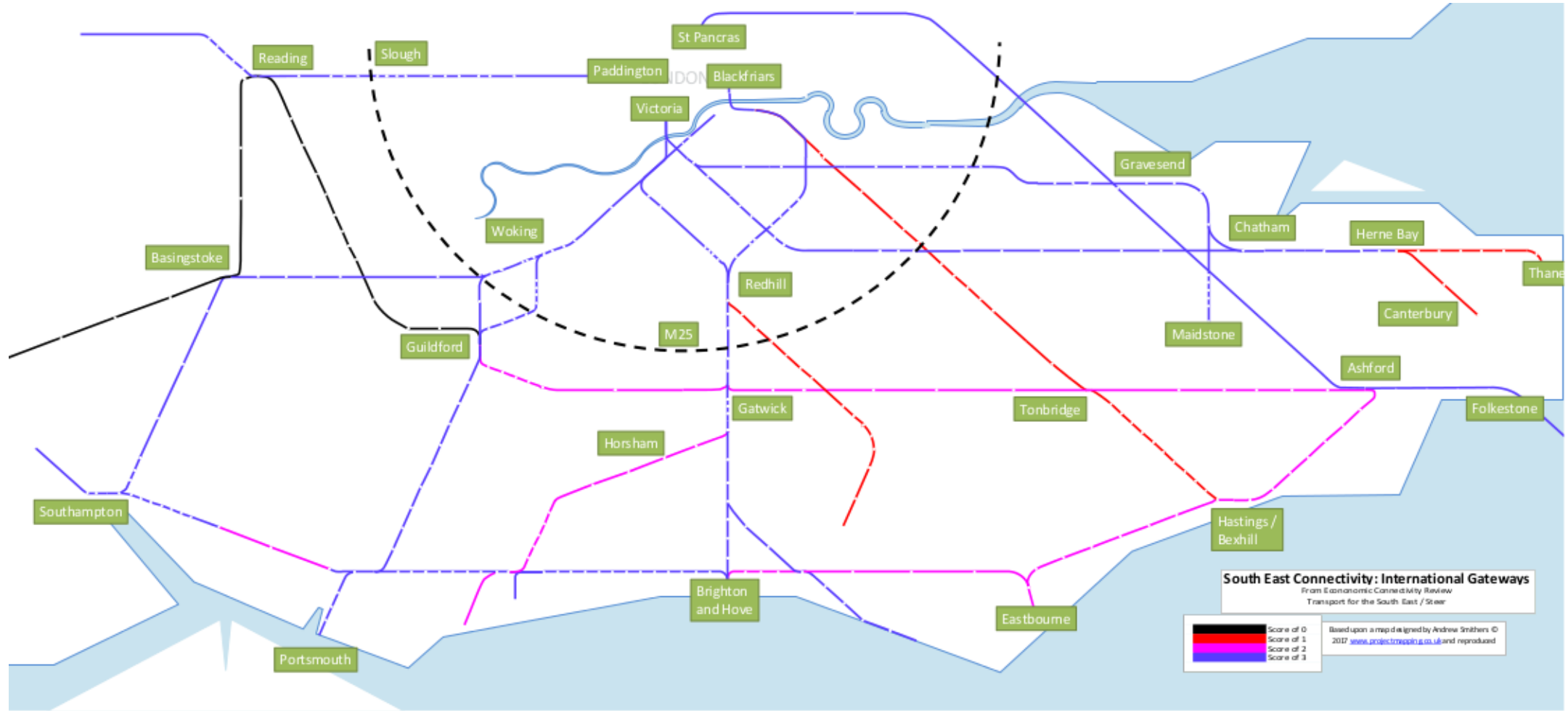
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International Gateways

- The International Gateways metric is a score of how well a corridor brings access to international travel
- International Gateways are defined as Ports, Airports, and International Rail Terminals.
- Corridors scored no ticks if they do not provide access to an international gateway.
- Corridors scored one tick if they provide access to an international gateway, but do not directly serve the international gateway.
- Corridors scored two ticks if they directly serve an international gateway, but it is not a principal route.
- Corridors scored three ticks if they are a principal route to an international gateway.

International Gateways



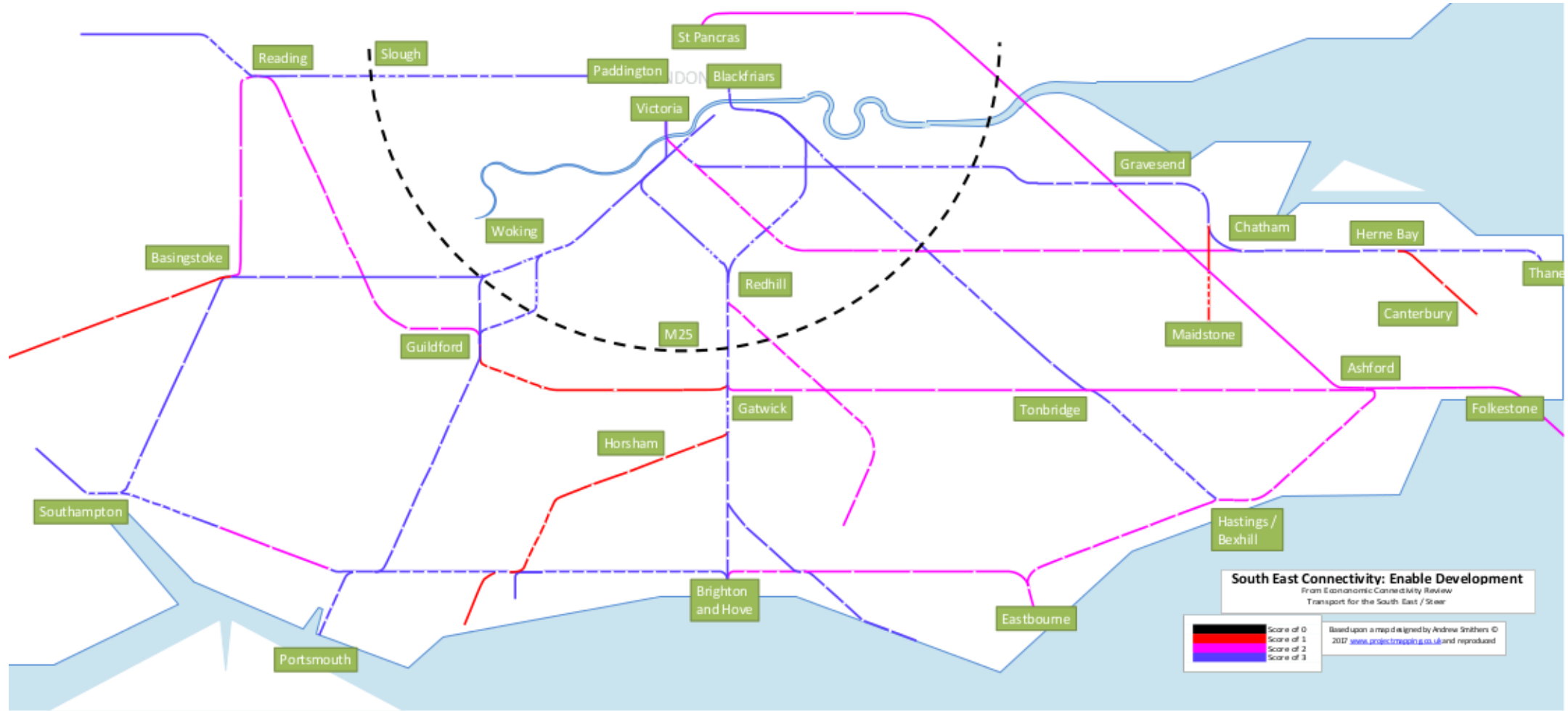
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Enable Development

- The International Gateways metric is a score of how well a corridor brings access to planned developments.
- Only “Major” developments are considered - >500 homes or >250 jobs. The report caveats that this may be disregarding more than half of development in the SE.
- A score of three ticks was given for corridors on which the total homes and jobs planned in major developments is 30,000 or more.
- A score of two ticks was given for corridors on which the total homes and jobs planned in major developments is more than 7,000, but less than 30,000.
- A score of one tick was given for corridors on which the total homes and jobs planned in major developments is more than 500, but less than 7,000.

Enable Development



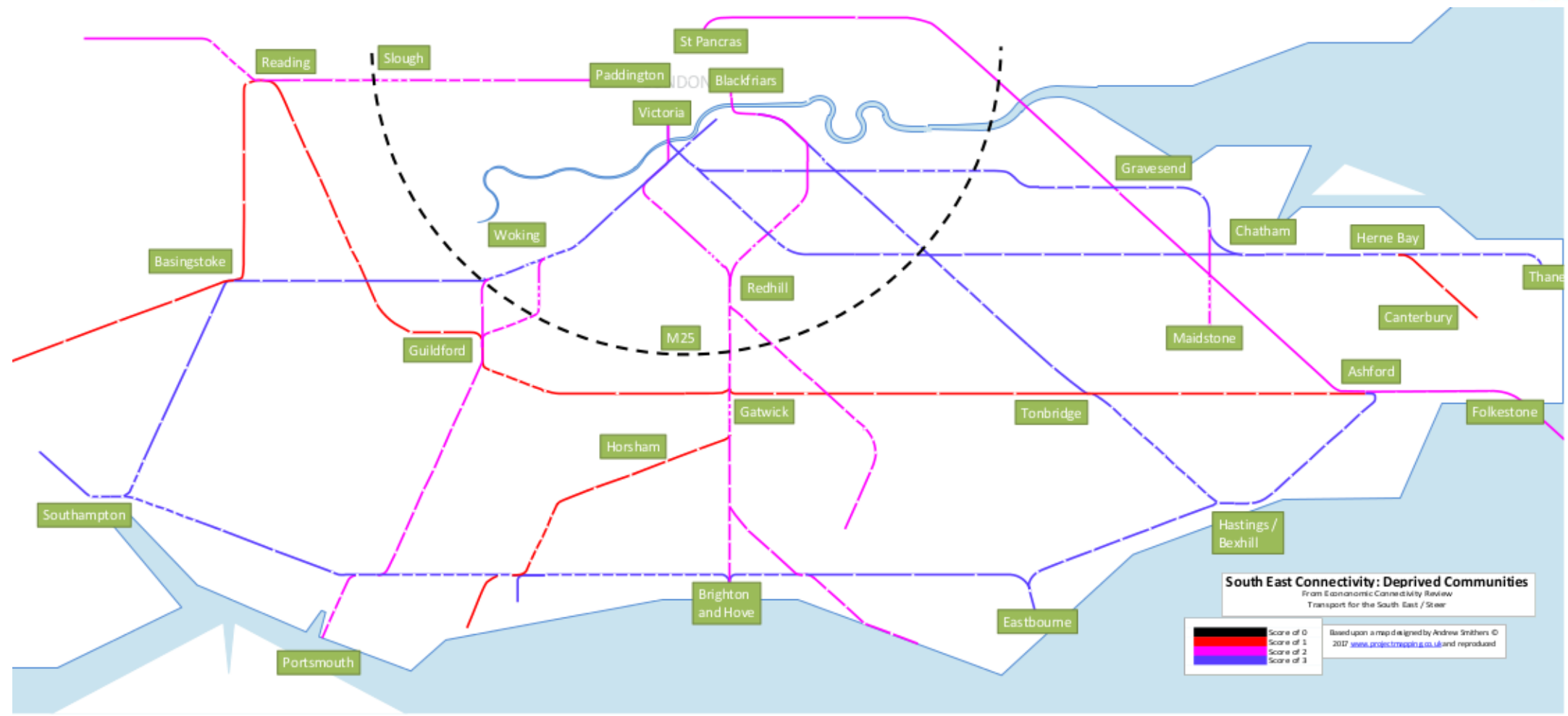
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Deprived Communities

- The Deprived Communities metric is a score of how well a corridor supplies deprived local authorities
- Deprivation data for local authorities collected from national data
 - In South East, vast majority of deprived local authorities are coastal
- A score of three ticks was given for corridors which serve more than one Local Authority District in the top 30% most deprived or at least one Local Authority District in the top 20% most deprived.
- A score of two ticks was given for corridors which serve at least one Local Authority District in the top 30% most deprived.
- No corridors have been scored no ticks because all corridors are part of a regional and national network which supports access to and from deprived communities. This also acknowledges the fact that all corridors provide access to and from localised areas of deprivation.

Deprived Communities



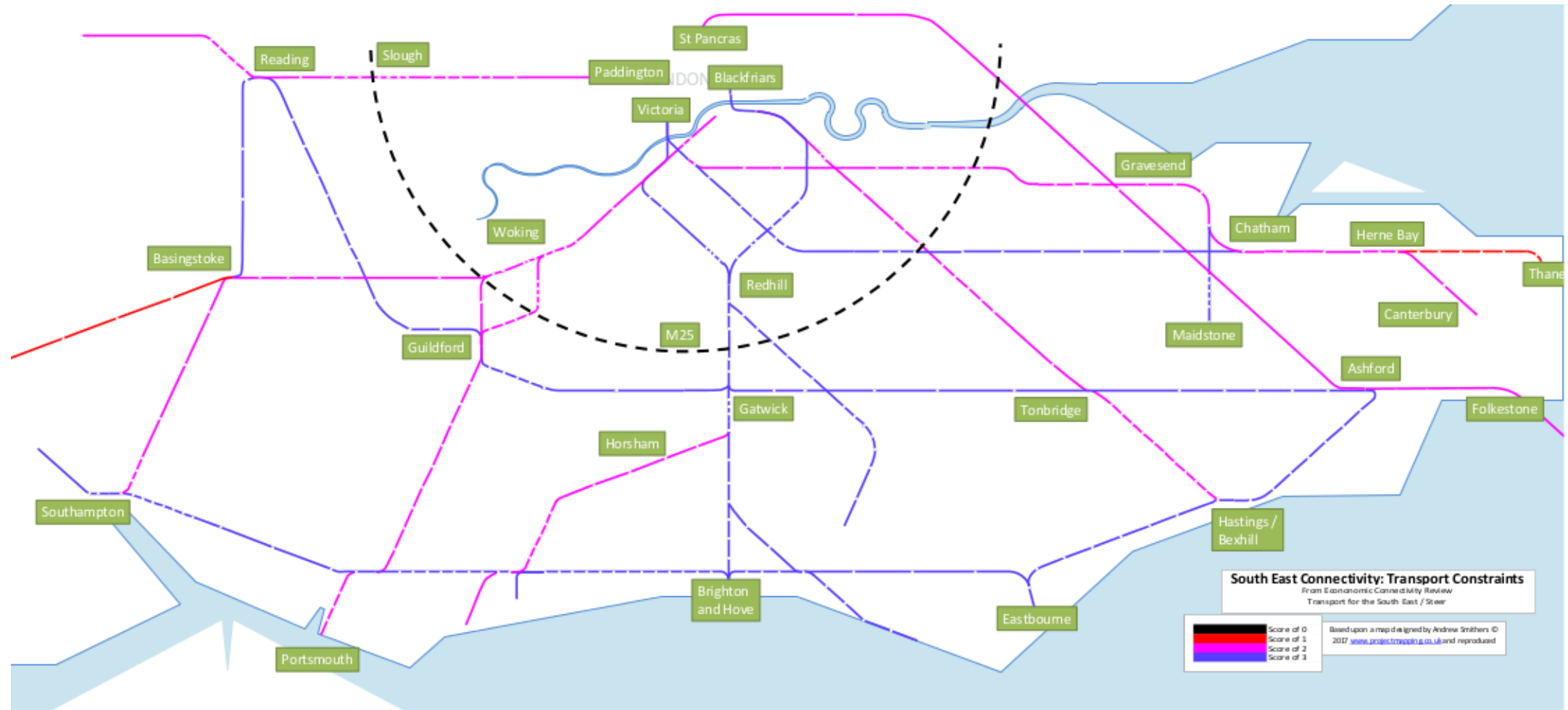
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Transport Constraints

- The Transport Constraints score is a metric of congested corridors are.
- Transport Constraints are scored both in a qualitative and quantitative assessment. These are then qualitatively combined.
 - Qualitative: Through review of Highways England's Route Strategies, Network Rail's long-term planning documents, Local Transport Plans, and Strategic Economic Plans, the key transport constraints by corridor were identified (e.g. congestion, heavy traffic, rail network and onboard crowding, safety). The more severe and numerous, the higher the corridor scored.
 - Quantitative: Using the South East Regional Transport Model, the annual hours of delay per KM for all road users was analysed to identify the total level of 'constraint' on each corridor

Transport Constraints



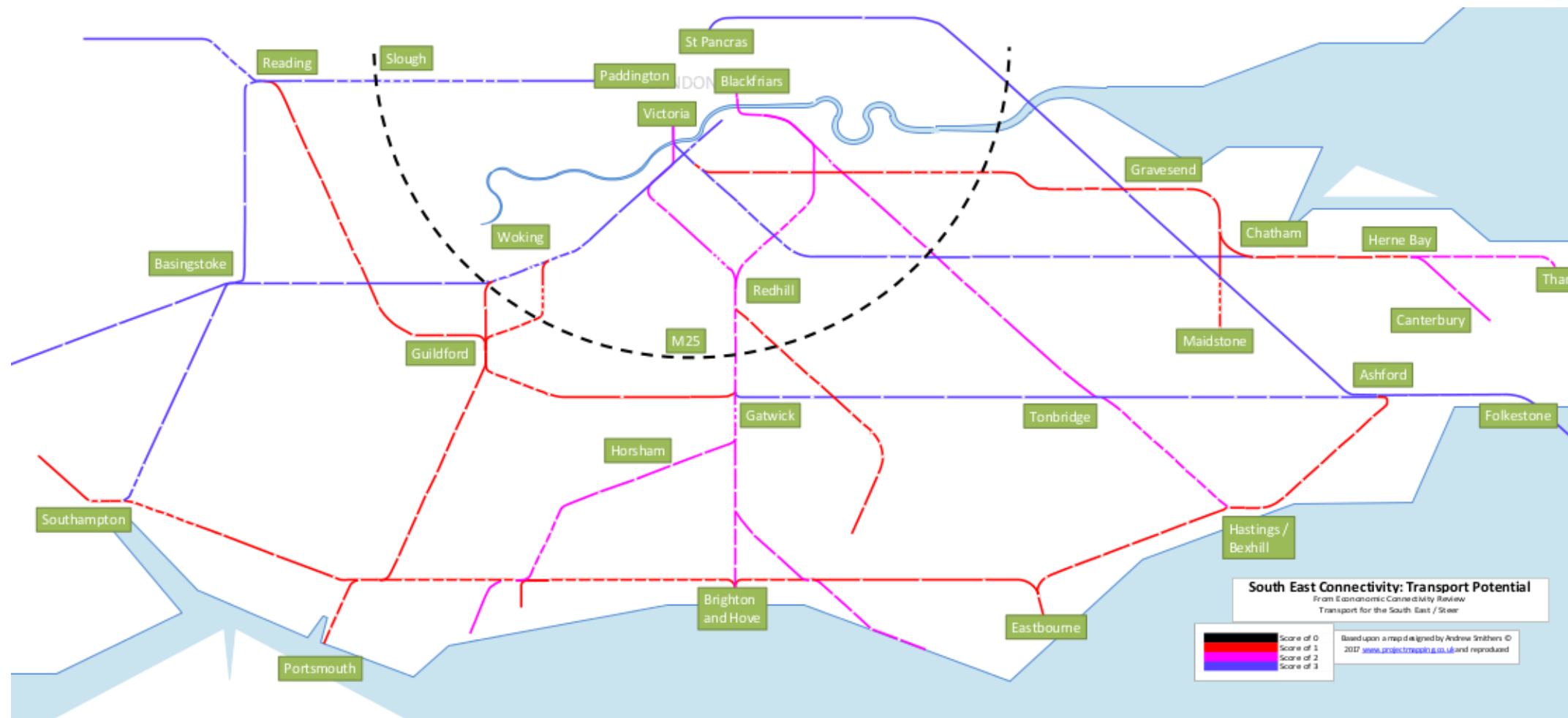
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Transport Potential

- The Transport Potential metric is a score for how feasible future transport investment is along the corridor.
- Transport Potential is scored along 3 categories for potential hinderances for development along a corridor. These categories are then qualitatively combined into an overall score.
 - Environment: The extent to which the delivery of transport interventions along each corridor could be affected by proximity to protected areas such as National Parks, Areas of Outstanding Natural Beauty or Sites of Special Scientific Interest. The lesser the extent to which transport intervention on the corridor is affected by proximity to protected area the higher the score.
 - Population centres: The extent to which delivery of transport interventions along each corridor could be affected by proximity to population centres. The lesser the extent to which transport intervention on the corridor is affected by proximity to population centres the higher the score.
 - Identified proposals: Through review of Highways England's Route Strategies, Network Rail's long-term planning documents, Local Transport Plans, and Strategic Economic Plans, existing proposals on each corridor were identified. The more numerous or substantial the proposals on a corridor, the higher the score.

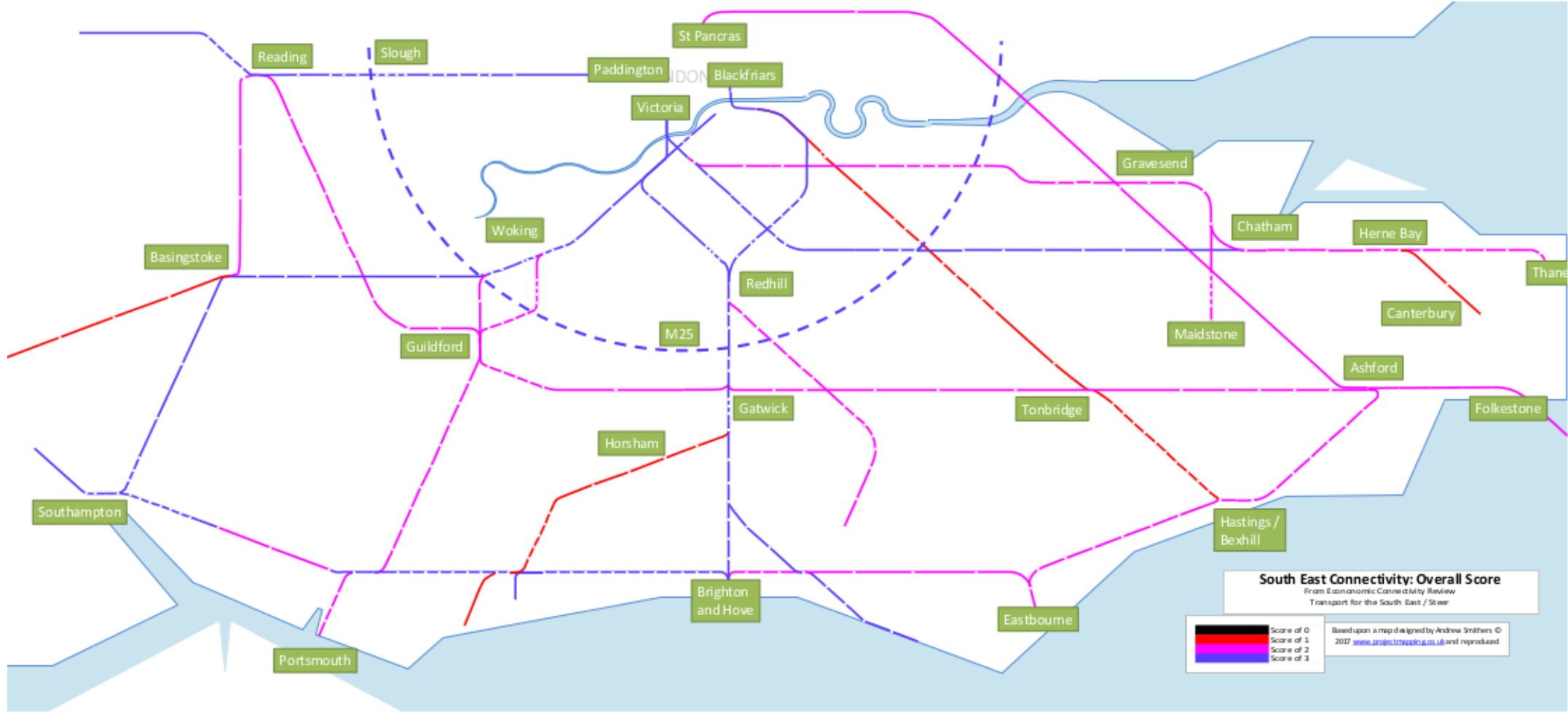
Transport Potential



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Overall Score



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Conclusions

- *A27-M27 West Coastway* ranks third in order of priority in Transport for the South East's Economic Connectivity Review.
- Improvements to the route would support the following objectives:
 - Business connectivity
 - Labour market efficiency
 - International gateways
 - Enable development
 - [Support] deprived communities
- Study acknowledges the limited transport potential for improvements on the route due to national parks and population centres.

Contents

Scheme objectives

DfT

Transport for the South East

Network Rail

Others

Next steps

South East Route

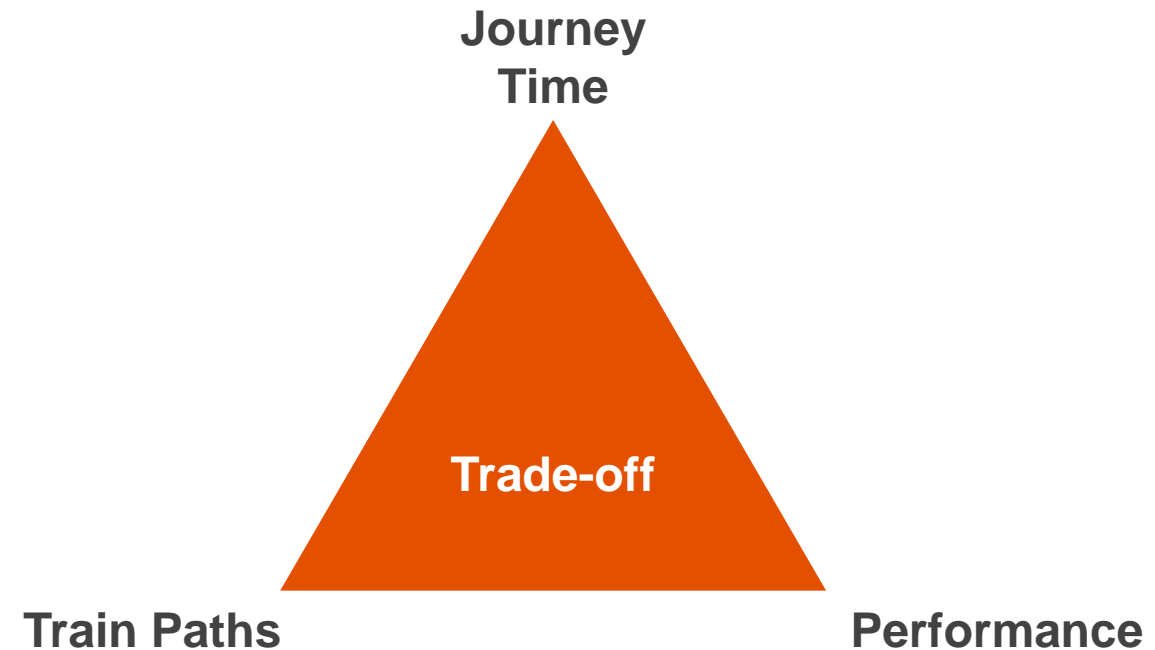
- Supporting the vision of the CP6 Delivery Plan
- Mapping these onto objectives?
 - Eg: proposed train service outputs shall not adversely affect punctuality.

<p style="text-align: center;">Dependability</p> <p>An <u>available</u> service, trusted by passengers.</p> <p>Cancellations = 1% and Average Passenger Lateness = 1.5 minutes</p>	<p style="text-align: center;">Punctuality</p> <p>Delivery of a <u>right time railway</u> at every station.</p> <p>On-time arrivals (at all stations) = 72% and PPM = 94%</p>
<p style="text-align: center;">Frequency</p> <p>A <u>service that meets reasonable expectations</u></p> <p>Delivery of 24 trains per hour through the Thameslink central London core (a 33% increase from the current 18 trains per hour).</p>	<p style="text-align: center;">Safety</p> <p><u>Lowest possible risk of injury</u> to passengers, public and workforce.</p> <p>0 workforce fatalities and no more than one lost time injury for every 1,000,000 hours worked.</p>
<p style="text-align: center;">Efficiency</p> <p><u>Minimised whole-life cost</u>, investing to deliver efficiencies in future control periods and providing socio-economic benefits.</p>	<p style="text-align: center;">Sustainability</p> <p><u>Maintaining asset condition and capability</u> at steady state in the medium to long term.</p> <p>Returning to at least CP4 exit position on used life or condition indicators for all assets.</p>

Figure 1-1 South East Route vision

The planning challenge

- Trade-offs on a busy railway
- Quicker journey time and additional or more complicated train paths affect performance
- Need to balance the aspirations of key stakeholders against those of the operational railway.



Contents

Scheme objectives

DfT

Transport for the South East

Network Rail

Others

Next steps

Other stakeholders?

- Local authorities?
- Airports?
- Key attractions?
- Other transport providers?
- Rail user groups?

Contents

Scheme objectives

DfT

Transport for the South East

Network Rail

Others

Next steps

Conclusions so far

- Objectives need to be stakeholder-led; previous Market Studies were conducted in conjunction with key stakeholders for the relevant markets.
- Quantitative and statistical metrics helpful for the capacity question, but limited input into defining connectivity.

Next steps

- Working with key stakeholders to draw up list of key aspirations and objectives. Potential methods:
 - Structured survey
 - Workshop
 - Face-to-face discussions