

Wider Transport Connectivity Study Stage 1 Report -Executive Summary

1 INTRODUCTION

The Trans-Pennine Tunnel Wider Transport Connectivity Assessment (TPT WTCA) is led by Transport for the North (TfN), and sponsored by the Department for Transport (DfT). WSP | Parsons Brinckerhoff (WSP | PB), Steer Davies Gleave (SDG) and Volterra were commissioned by Highways England to undertake the study in October 2016.

TfN is working with the Department for Transport, Highways England and other stakeholders to explore the impact on the wider road network of the shortlisted options for a Trans Pennine Tunnel (TPT). The existing study is examining the ability of a tunnel to improve regional connectivity and create social and economic gains for Sheffield and Manchester whilst enhancing the natural environment and protecting the Peak District National Park.

Figure 1 - Immediate Study Area

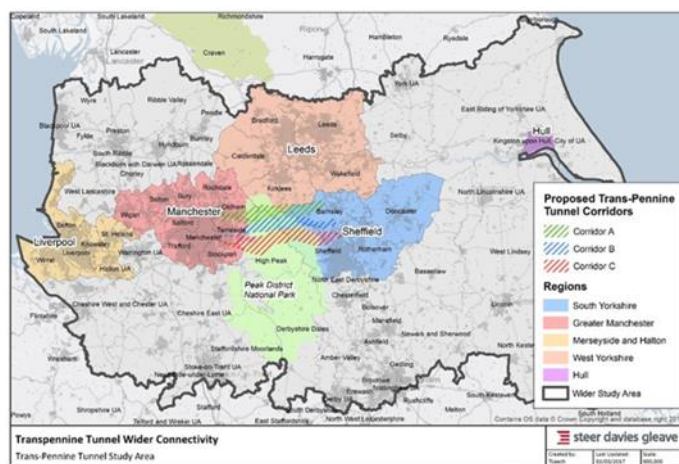


This study will enable TfN to better understand the broader impact on the wider road and transport network for the shortlisted options for the Trans-Pennine Tunnel to be taken forward. These impacts may extend from Liverpool City Region to the west and Humberside to the east (Figure 2), despite the fact that they are outside the immediate study area (Figure 1).

The study is divided into 3 main stages, as outlined below:

- **Stage 1:** Review of previous work and further transport analysis.
- **Stage 2:** Option generation to identify potential options.
- **Stage 3:** Detailed assessment of options.

Figure 2 – Wider Study Area



Stage 1 Report Objectives

Stage 1 of the TPT WTCA study looks to outline and present the evidence base that will be used to underpin the identification of future infrastructure which may be needed to fully realise the benefits of improved Trans-Pennine connectivity. The analysis seeks to:

- Understand the current and future context and conditions within the wider study area. This includes a review of bus/rail, current policy, environmental constraints, future development, journey times, labour markets, previous studies, road congestion and capacity, safety, socio economics, topology and travel patterns.
- Examine the case for intervention through the preparation of a sound body of evidence to demonstrate the need to develop any improvement scheme.

The overall objective of this Stage 1 report is to review previous study work and policies, and conduct further transport analysis to reach a preliminary view on the need for transport interventions required for the wider network.

2 KEY FINDINGS FROM STAGE 1 REPORT – THE NEED FOR INTERVENTION

STRATEGIES AND POLICIES

A review of relevant strategies and policies has shown a strong fit with local, regional and national strategies

The study aligns closely with other on-going work streams including the Northern Trans-Pennine Routes Strategic Study, M60 North West Quadrant Study, Northern Freight and Logistics Report as well as the emerging TfN Strategic Transport Plan. All these studies have identified the need to improve east- west connectivity across the Pennines.

ECONOMIC CONTEXT

The North's transport connectivity is a barrier to growth - the North's output per capita consistently 10-15% below the rest of England excluding London (NPIER, TfN, 2016). Hence there is a need to improve east-west connectivity to provide similar journey times to those experienced on north-south movements.

The Ports of Hull, Immingham, Liverpool, Salford are located on the axis of the proposed new TPT corridors with significant growth planned. Growth of the Ports through improved international connectivity provides a substantial opportunity for further economic growth in the North.

Although the North is home to 24% of the UK population, it handles 56% of rail freight tonnage, 35% of road freight tonnage and 35% of ports tonnage. Maintaining reliable surface transport links for freight is important in delivering the economic aspirations for the North.

Manchester Airport is the biggest and most internationally connected airport in the North, with a throughput more than 50% larger than all the other Northern airports combined. Aspirations exist to grow other regional airports with the TPT providing enhanced connectivity to Doncaster-Sheffield Airport. Improved international connectivity is an important component in rebalancing the North's economy.

LOCAL REGIONAL CONTEXT

Approximately 50% of employment within all local authorities falls within one of the NPIER capabilities; this figure is highest for the local authorities of Manchester and Sheffield – which possess the greatest numbers of high-skill, high value-added jobs. Providing greater choice and opportunities for the North's labour force, through improved connectivity between labour markets is important to achieve Northern Powerhouse aspirations.

The populations of Greater Manchester, West and South Yorkshire are growing at a faster rate than the Wider Study Area average which is predicted to grow at a slower rate than England as a whole.

Housing - The following upper housing growth targets are proposed:

- Greater Manchester Spatial Framework (Draft) - 227,200 (2015 to 2035)
- The Sheffield Plan (Draft) - 19,300 (by 2034)
- Barnsley Local Plan Consultation Draft – almost 20,000 (by 2033)

It is important that projected growth in population and housing numbers is supported by improved transport links and improved connectivity.

There is currently limited commuter travel between the two labour markets of Sheffield and Manchester; few people commute from Manchester to Sheffield and vice versa. A significant number of trips are not being made between Manchester and Sheffield due to the constraints of the existing Trans-Pennine links.

Improved Trans-Pennine connectivity will assist with improving access to labour markets.

TRANSPORT CONTEXT

Leeds city centre is approximately 4 miles further than Sheffield city centre from Manchester city centre using the best available route (M62 for Leeds and A628 for Sheffield), yet drivers from Leeds can reach Manchester 20 to 30 minutes faster than Sheffield during off-peak conditions.

The A57/A628/A616 is the predominant route for Trans-Pennine movements between Manchester and Sheffield with about 12,400 vehicles a day.

The A628 has approximately 15% HGV flows. Although this is a comparable proportion to the M62, the route is mainly single carriageway, causing delay to non HGV traffic.

Road closures are a significant cause of disruption to traffic. There were a total of 116 road closures from 2010 to 2013 on the A57, A628, and A616. Nearly 80% of road closures are a result of collisions or bad weather, two thirds of these road closures last longer than two hours.

The M60 between J4 and J3 is ranked 18th in the least reliable roads nationally, with the A61 between the A616 and M1 (J36) in the top 50. The western sections of the A57 and A628 are in the top 10% and 20% of the SRNs national road network for vehicle hour delay.

The findings above demonstrate the problems and issues on existing routes across the South Pennines and the need for intervention.

The TPT would mean that up to an additional 800,000 people would come within a 60-75 minute drive time from the centre of Sheffield compared to the existing situation. These gains are primarily from the Merseyside area, but extend as far north as Preston. Hence improved connectivity provides the opportunity to bring places closer together. Improved Trans-Pennine connectivity will have a tangible impact in terms of making a greater area more accessible and reaching a larger economically-active population.

SIGNIFICANT COMMITTED AND PLANNED TRANSPORT INFRASTRUCTURE IMPROVEMENTS

There are a number of improvement schemes along the strategic road network within the immediate study area committed for delivery as part of Road Investment Strategy 1. Furthermore, Highways England has published several 'Route Strategy' documents which establish outline operational investment priorities for strategic roads for the period April 2015 – March 2020.

The two Route Strategy documents relevant to this study are: the South Pennines Route Strategy and North and East Midlands Route Strategy. Committed schemes identified in these strategies will be taken into the next stage of assessment for this study, and their contribution to managing TPT traffic and growth will be assessed in the sifting to be undertaken in Stage 2.

ENVIRONMENTAL EVIDENCE

The study area contains the Peak District National Park which is a nationally protected area. The National Park landscape is important to the regional's health and well-being, making a significant contribution to the economy as well as providing an attractive place for people to live, work, visit and enjoy. As part of evidence gathering, comprehensive mapping of environmental constraints within the immediate area of intervention has been undertaken. This includes mapping air quality management areas (AQMAs), special areas of conservation (SPCs), special protection areas (SPAs) and nature improvement areas (NIAs). Interventions can also provide a range of opportunities for environmental improvements in the study area. The environmental impacts of potential interventions will be considered in more detail in the remaining stages of the study.

3 PRELIMINARY VIEW ON THE NEED FOR TRANSPORT INTERVENTIONS REQUIRED FOR THE WIDER NETWORK.

The Trans-Pennine Tunnel would have a direct impact on the M1, M60 and M67 due to the strategic reassignment of traffic from other routes. No direct impacts are expected on the public transport networks if the tunnel is constructed. We have identified potential interventions in three categories (See Figure 3 – Potential Transport Interventions):

- Primary interventions are those necessary to mitigate the immediate impact of traffic increase due to the Tunnel and enable congestion free access to the Tunnel; secondary interventions are those that enable accessibility to the wider urban area or provide an alternative to a primary intervention; and thirdly, wider connectivity interventions that are other strategic infrastructure improvements which would help to maximise the benefits of the Tunnel across a wider area. Some sections of the M60 are amongst the most congested motorway links in the country, so the primary interventions include improvements to the M60 and M67. Similarly, the sections of the M1 immediately adjacent to the TPT route are also identified as primary interventions. Other potential primary interventions include improvement to the A61 corridor into Sheffield city centre from the Tunnel as well as improvements to the A616 and A628 between the Tunnel and the M1.
- Potential secondary interventions include sections of the M1 to the south of Sheffield, some sections of the M60 and the proposed A6 to M60 Relief Road that is currently the subject of a feasibility study. In order to seek to provide a multi-modal solution, strategic park and ride sites are proposed either side of the Tunnel to capture some car traffic using the Tunnel and transfer it to public transport. The A57 into Manchester city centre and Glossop are two specific areas where there may be

traffic increases due to the Tunnel. Such traffic increases would be undesirable in both locations and these have therefore been identified as potential locations for some form of intervention to avoid an increase in traffic.

- Finally, potential wider connectivity interventions have been identified that would help to ensure that the benefits of the Tunnel are realised across a wider area. Three new strategic routes are proposed, all in the east. Two of these are alternatives; being links between the M1 and the A1(M)/M18 passing north of Rotherham or the A1(M)/M180 passing north of Barnsley. These would improve access to Doncaster- Sheffield Airport and the Humber Ports. The third intervention is Sheffield Southern Demand Improvements. This area will be assessed in further detail to assess the impacts of the tunnel on the south of Sheffield.

No further interventions are proposed for the west, as the key bottle-neck here is the M60 motorway which is the subject of, the M60 NW Quadrant strategic study. Interventions proposed by that study are expected to enable wider Tunnel connectivity to the west.

4 NEXT STEPS

The findings and evidence base from the Stage 1 report will be used to develop a set of intervention-specific objectives, and it will inform the development of the long list of interventions. The intervention - specific objectives will be used to sift and appraise the long list of options into a short list as part of Stage 2 of the study, and for detailed appraisal as part of Stage 3. This will include the analysis of wider economic benefits that could be delivered by improved east-west connectivity through the South Pennines as far as the wider coast to coast geography.

Figure 3 – Potential Transport Interventions

