

Cheshire and Warrington Matters:

A Transport Strategy to Support the 2017 SEP

EXECUTIVE SUMMARY

November 2017

Context for the Strategy

The Strategic Economic Plan (SEP), produced by the Cheshire and Warrington Local Enterprise Partnership (CWLEP), covers period up to 2040. It sets out an ambitious growth strategy, building upon the strengths and opportunities that exist within Cheshire and Warrington and its strategic location in relation to key economic corridors and areas of significant investment and planned growth.

The success factors outlined by the SEP include a series of clearly defined outcomes that are sought to enable growth targets to be met by 2040 which include the following:

- An aim to grow the economy to at least a £50 billion a year economy in terms of Gross Value Added;
- To increase the number of jobs by 120,000 (net additional);
- To build up to 127,000 new homes;
- To improve productivity per resident such that it is 20% higher than the UK average;
- Enhancing Cheshire and Warrington as an attractive, aspirational and successful place that supports economic growth;
- Delivering a transport system in line with the needs of local people and businesses; and
- Embracing new technologies and innovation to support efficient delivery of transport provision.

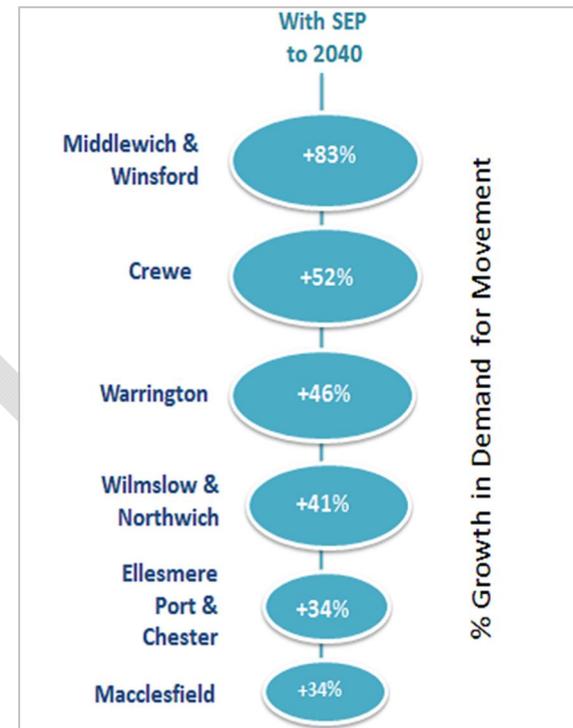
The SEP also identifies the need for growth to be targeted in key growth opportunity areas. Whilst not limited to these areas, connectivity

will be particularly important for these four areas of spatial focus for growth:

- Cheshire Science Corridor Enterprise Zone,
- Mersey Dee Economic Axis,
- Constellation Partnership Development Zone; and Warrington New City.

Transport and connectivity are central to ensuring that aspirations for growth within Cheshire and Warrington are met. Accessibility is also a crucial factor in enabling the sub-region to continue to be an attractive and dynamic place in which to live and do business. In a recent quality of place survey undertaken by the LEP 90% of respondents cited transport as a key issue. A good transport system enables businesses to reach markets and access skills and talent, and it allows residents to reach jobs, education, shops and services. Transport can also have a major impact on people's health and well-being by facilitating social interaction, encouraging more active, healthy travel and addressing traffic pollution.

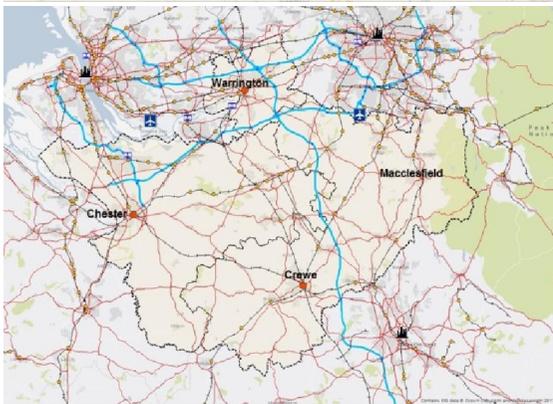
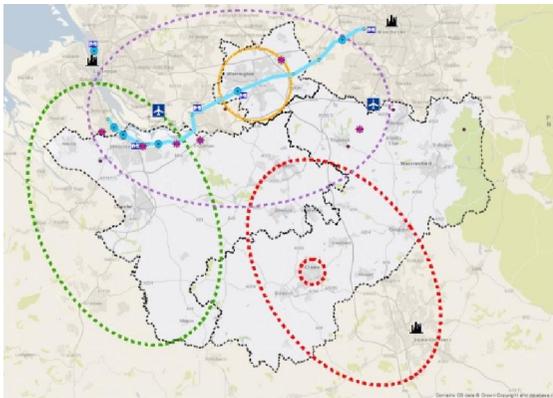
To understand the implications of the growth potential of the sub-region on transport CWLEP undertook analysis which included use of spatial modelling to identify where potential growth was anticipated. The growth distribution is anticipated to be more concentrated in some areas than others. Aligned to local growth priorities, the scale of change is forecast to be highest in Middlewich, Winsford, Crewe, Warrington, Northwich, Chester & the M53 Corridor.



This Transport Strategy identifies the transport investment priorities needed to accommodate this increase in demand. The strategy is multi-modal and seeks to make the best use of existing networks with targeted improvements to improve road access to key developments, tackling congestion pinch points, ensuring frequent HS2 services call at Crewe to open up connectivity, enhancing regional rail services to maximise connectivity to HS2 and key rail hub stations and improving local bus services.

**Map to be inserted showing growth locations,
Rail Network, Rail Hubs, Strategic Road
Network, Major Road Network, pinch points and
short-term investment priorities**

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Source: Google

Strategic Economic Plan Areas of Focus

Constellation Partnership

Building upon a new HS2 Hub Station coming to Crewe and the area's success and growth in science, engineering, rail and automotive, coupled with its enviable lifestyle and unrivalled connectivity, our objective is to create a constellation new City. Through the expansion and regeneration of Crewe and stronger linkage to the cluster of towns and villages in mid-Cheshire, we will create the opportunity for growth that would otherwise take decades to deliver, and underpin Crewe's position as the "Gateway to the Northern Powerhouse". Across this area there is the potential to deliver over 100,000 jobs and over 100,000 homes.

HS2 to deliver a step-change in reduced travel times and increased rail capacity increasing the competitiveness and productivity of the Sub-region. In order to maximise the economic potential of the Crewe hub, it is essential that that access to it is maintained and enhanced. This means improving road access, tackling congestion pinch points, ensuring frequent HS2 services call at Crewe to open up connectivity, enhancing regional rail services to maximise connectivity to HS2 and improving local bus services.

Cheshire Science Corridor Enterprise Zone

In April 2016 the Cheshire Science Corridor Enterprise Zone was launched, covering 100

hectares of opportunity with the potential to attract in the order of 500 businesses and to create almost 20,000 jobs between 2015-2040. The EZ is targeted at the best commercial opportunities in the Science Corridor and comprises Alderley Park, Birchwood, Protos, Thornton Science Park and a portfolio of sites in Ellesmere Port.

The Science Corridor is physically well connected by road, rail, water and air, but increasing road congestion (especially on the M56) and limited public transport services will need to be tackled to support growth

Mersey Dee Economic Axis

The Mersey Dee Economic Axis is at a pivotal location linking the Northern Powerhouse and North Wales. It is the location of a substantial range of nationally important industrial and commercial activities providing 380,000 jobs and recording 27,000 registered companies. It is a hot bed for the energy sector, advanced manufacturing, and high-tech engineering, boasting international names such as Airbus, Toyota and Essar Oil.

To support growth transport connectivity needs to be enhanced to enable businesses across the sub-region to interact more easily. By reducing barriers to connectivity it makes the sub-region more competitive through reducing costs and supporting the range of local cross service provision, including tackling congestion pinch points, improving rail services and improving bus services.

Warrington New City

Warrington is one of the most dynamic and fastest growing urban economies in the UK today and one of the main engines of growth in the Northern Powerhouse. The strategy for delivering Warrington New City – in a nutshell completing the Warrington New Town and creating the Warrington New City through a programme of major investment in transport and community infrastructure – is set out in greater detail in 'Warrington Means Business'

Key components include:

- A New City at the heart of the Northern Powerhouse built on Garden City principles
- A City-wide Green Network – a framework for New City living
- A Ribbon of Blue – rediscovering the waterfront City
- A New Central City – a new city centre for the new Garden City
- New Garden Suburbs – enhancing existing neighbourhoods and creating beautiful new ones
- Stronger Healthier Neighbourhoods
- Houses for All –
 - A rich mixture of tenures and home types
 - Quality houses with gardens and urban space and parks to enjoy
 - Delivering the government's housing agenda – acceleration and additionality
- Sustainable Transportation and Connectivity – a step change in smart urban transportation

- Accessible Business and Employment Areas – jobs close to where people live and at strategic transport interchanges
- Waste and Energy – a low carbon and energy positive city
- The Smart City – smart technologies and smart people
- Ensuring Quality in Design – hotwiring design into the City

Transport plays a central enabling role for the spatial priorities that are identified as key growth opportunities. As one of the prime enablers for growth, a number of specific transport and connectivity objectives have been identified within the SEP:

It is also recognised that the Strategy and its desired outcomes cannot be delivered in isolation. The economy of Cheshire and Warrington and its transport networks are interwoven with those of neighbouring sub-regions and Core Cities. Working with partners in the Northern Powerhouse, Midlands Engine and North Wales will be a fundamental requirement for a successful strategy. Development and implementation with strategic transport partners such as Highways England, Network Rail and the Department for Transport will be crucial for the successful delivery of transport interventions.

SEP Transport and Connectivity Objectives

1. Improve connections to support development of priority employment sites including those within the Cheshire Science Corridor.
2. Improve connections to neighbouring sub-regions, including international gateways to ensure that business has connectivity to global markets and to facilitate the economic benefits of both out and in commuting that takes place daily.
3. Resolve pinch points and congestion in the transport network, both road and rail, which act as barriers to growth if left unaddressed. Delays and unpredictable journey times affect business activity directly (e.g. the supply of components to the automotive sector) and indirectly, and influences commuting flows.
4. Address network resilience issues to deliver predictable and efficient journey times to support business productivity.
5. Make best use of the existing road (e.g. smart motorways) and rail network (e.g. electrification) to capitalise on existing infrastructure, offering efficient mechanisms for improvement and helping deliver best value for money from investment.
6. Ensure that the maximum benefit is gained in economic and connectivity terms from the development of the HS2 Hub Station at Crewe.

Transport Challenges and Opportunities

Whilst Cheshire and Warrington benefits from high levels of strategic connectivity it is recognised that there is significant potential for strategic sites to be enhanced though improved and integrated access. Equally it is also acknowledged that there is wider disparity in the level of connectivity across the sub region and a need to ensure that transport networks remain inclusive and provide residents with necessary access to jobs and services.

support the broadening of labour markets and provide increased opportunities for business and residents via enhanced multimodal connectivity across Cheshire and Warrington.

Existing Challenge	Opportunity
Congestion on strategic routes	Improve network capacity and resilience, restrict economic growth, promoting
Cross boundary movements below potential, and associated economic growth impact	Promote economic growth by ensuring access to / from sub-region from / to through agglomeration
Sub-region movements concentrated on nearest urban centres, limited cross-borough	Increase capacity and frequency of transport in region key centres, promoting economic growth, increased accessibility and agglomeration
Dominant car mode	Mitigate negative congestion and improve alternatives, including technology based
Low bus use	Concentrate new development to make bus use more commercially viable, and promoting public transport integration, increasing accessibility
Relatively low connectivity for rural areas compared to urban areas	Promote public transport measures which reduce the rural disparity, such as through improved park & ride and local rural community services
Accommodating development related traffic growth	Encourage development located in areas of existing good transport access, or with potential for good access through associated transport schemes, increasing economic viability potential
Poor local service rolling stock, journey times and frequencies	Encourage more people onto public transport instead of car through improved local rail services, reducing car levels and in turn mitigating congestion and air quality impacts
Increasing levels of cycling and walking from low base	Creation of walking and cycle friendly neighbourhoods that support the establishment of healthy, attractive and sustainable places. Local access to public transport through direct and convenient walking and cycling access.



Source: Google

The success of the sub region's transport networks will be seen through its capacity to

Key Transport Design Principles

To ensure that the strategy identifies appropriate solutions we have developed a set of guiding principles. The principles represent key aspects of a successful transport network and are intended to help shape the identification of transport priorities.

Integrated Establishing an integrated transport network supporting seamless travel within Cheshire and Warrington and to wider opportunities outside the sub region. Supporting provision of choice and flexibility with alternatives to the car seen as viable and attractive.

Accessible and Inclusive The transport network should be accessible and inclusive for all users. It should provide a high level of service for the full length of journeys including the first and last mile and provide affordable options.

Customer Focused The transport network will meet the diverse requirements of local people and businesses. It will ensure customers have confidence in the network and innovations are used to drive forward quality.

Sustainable Provision of attractive and high quality alternatives to journeys by private car supporting modal shift. Walking and cycling will provide a viable option for shorter journeys through the establishment of attractive routes serving local neighbourhoods and high quality routes to public transport services.

Resilient and Safe The transport network will be well maintained and resilient to change and events. It will be safe, reducing accidents and deaths.

Embracing change New technologies and innovations will be embraced supporting efficient transport systems. Electric vehicles and on-demand travel will play a new role in personal mobility. Live information and smart ticketing will improve the customer experience.

Addressing the Challenges

Implementing the strategy will require a collaborative approach that ensures strategic alignment and promotion of complementary activities. Equally it is recognised that strategy development is an evolving process that will be interlinked with wider strategy development, investment planning and scheme development. As a result the strategy will, in effect, be a live tool for interfacing with wider work and driving forward the transport agenda.

Interlinking with Wider Strategic Context



The delivery of the Strategy will focus on embedding the identified priorities and opportunities into parallel areas of work and

delivery. This will include the following core activities:

Working closely with Transport for the North to identify transformational improvements: In the short-term this involves inputting into the West and Wales Strategic Development Corridor Study to develop the evidence base to underpin our investment priorities and ensure the needs of the sub-region are taken into account within TfN's Strategic Transport Plan.

Collaborative working with Highways England to enhance the Strategic Road Network: We will work closely with Highways England to identify and prioritise schemes in the sub region which tackle congestion, journey reliability and network resilience. This will include inputting into the post-2020 Road Investment Strategy. We will also look to plug gaps in strategic corridors such as the M6 to A55 corridor.

Improving access to Manchester Airport: We will work closely with GMCA, TfGM and the relevant local authorities to improve connectivity to Manchester Airport both as an international gateway and as a location of significant employment opportunity. We will work collaboratively with the authorities to manage the impact of congestion and maximise public transport connectivity.

Developing the Plan for Rail: We will work with neighbouring authorities, the rail industry and TfN to develop a comprehensive plan for improving rail services across the area. Key emerging priorities are the development of key

hubs at Crewe, Chester, Warrington and Manchester Airport to improve inter-regional connectivity, working with the DfT franchises to promote services connecting those hubs which are quicker and more frequent and working with NR to prioritise and deliver cost effective infrastructure needed to support the improved services.

Improving Local Transport: We will focus on tackling pinch points, improving the reliability of the Major Road Network and increasing access to the wider transport network to improve internal movements within the sub-region and to open up key development land to support growth. This will include local highways, public transport and pedestrian and cycling improvements along with ensuring the transport network and economic opportunities are accessible for all.

Collaboration with the bus industry will be essential in order to improve bus services that support access to employment and education. We will also work with the Department for Transport and local authorities to explore new opportunities related to powers available to local authorities in the Bus Services Act 2017.

Promoting Integrated Land Use Planning: We will work with planners and developers to promote the integration of land use and transport planning to ensure new development occurs in sustainable and accessible locations. This is to include identification of opportunities to enhance access to strategic sites.

Complementing schemes in neighbouring areas: We will work with neighbouring Local

Authorities and stakeholders to identify the impacts and opportunities resulting from schemes outside Cheshire and Warrington. This will include collaboration throughout scheme development and mitigating impacts during the construction phase.

Strategic Transport Priorities

Jacobs consultancy were commissioned by the Cheshire & Warrington LEP (C&W LEP), along with the Local Authorities of Warrington, Cheshire East and Cheshire West to undertake a study to identify the core transport requirements and connectivity network that will enable and then supports the achievement of the LEP's strategy and ambition- of a £50bn economy in Cheshire and Warrington by 2040. The work analysed the scale of challenge at the local level, especially in terms of growth and demands on local networks. From this, a series of transport interventions were generated, and evidence and objective led prioritisation process was undertaken to identify a suitably scaled and prioritised transport investment strategy, focussed on maximising economic growth.

To work concluded that to address the transport challenges the transport network needs to provide:

- Fast, frequent connectivity between sub-regional centres for people and freight;
- Travel by car and sustainable modes within 30 minutes between key centres

- Reliable journey times, with all growth areas within 1 hour, door-to-door, from all parts of Cheshire and Warrington, and key economic centres
- Support existing areas of success through:
 - o Dedicated, high-quality inter-urban corridors to Manchester, Liverpool, Wales, Birmingham and Yorkshire;
 - o Direct links to London and the UK's top city economies; and
 - o Fast, reliable connectivity to key international gateways.

To meet these requirements, and to achieve the necessary connectivity and capacity enhancements, it is recognised that sustained and targeted investment will be required over the short, medium and long term.

In association with the respective Local Authorities, the LEP has identified a list of proposed schemes which will address the transport and connectivity challenges and opportunities. The immediate focus for the Strategy is on the short term measures to be delivered over the next five years or on scheme development which supports longer term schemes. A summary of the short term transport and connectivity opportunity schemes and studies is set out below.

Rail Network

The DfT is responsible for the award of passenger rail franchises in conjunction with Welsh Government and Transport for the North and once awarded, monitors and enforces the contracts with the private sector franchisees.

Network Rail operates and maintains the rail infrastructure as a "not for dividend" company limited by guarantee. Freight operators access the network on a commercial basis.

Improving Rail Services

For too many journeys across the area rail travel does not match the convenience, comfort or cost of travel by car. To support a doubling of the economy rail will need to play a greater part than it currently does for internal and cross boundary movements.

We need to revolutionise rail travel across the geography building on HS2 investment to create effective access to labour markets, population centres, education and healthcare in order to unlock growth.

Our priority is to increase connectivity to our intra-regional network by enhancing services through our core hubs to facilitate better interchange and hence open up a wider range of destinations. Our aim is to increase service frequencies, reduce journey times and improve the quality of the trains across the network to support the growing economy.

Improving Rail Infrastructure

Improving 4 key hubs (Crewe, Chester, Warrington and Manchester Airport) will maximise connectivity and accelerate growth, opening up a whole range of destinations including major cities, ports and airports

The immediate priority is to ensure that **Crewe Hub station** is delivered such that it spreads the benefits of HS2 across a wide area by having more HS2 services stopping at Crewe,

and facilitating interchange with enhanced regional services and hence needs to be able to:

- Provide a high quality interchange with platforms adjacent to the existing station, not on the independent lines.
- Accommodate 5-7 HS2 trains per hour stopping at Crewe, connecting to Manchester, Birmingham and London;
- Have flexibility for HS2 to serve other destinations including Chester, North Wales and further services to Warrington, utilising the splitting of trains at Crewe to serve the widest range of destinations;
- Accommodate enhanced regional rail services and freight; and
- Build in flexibility for the future in order to respond to other infrastructure projects e.g. Northern Powerhouse Rail, any potential changes to HS2 Phase 2b.

Schemes under Development

- **Crewe HS2 Hub:** Development of a hub station with the capacity to serve HS2 and improved regional services.

Priorities for Scheme Development

We will work with the rail industry to assess options for improvements to journey times, capacity, services and infrastructure across the network. Short-term priorities include enhancing accessibility to and integration with HS2 and, in the longer term, Northern Powerhouse Rail. Specific scheme development includes:

- **Chester Station Improvements:** to enhance capacity and flexible operation of trains within and in the vicinity of Chester Station including Chester East junction;
- **North Wales/Chester to Crewe/Warrington:** capacity and line-speed improvements
- **Crewe to Warrington:** capacity enhancements and journey time reductions on West Coast Main Line aligned to HS2 delivery
- **Rail Station facilities upgrades:** Initial work to improve passenger experience and accessibility within and surrounding Railway Stations
- **CLC Rail Line Electrification & Warrington East:** A second stage of the study looking at the electrification of the CLC line between Liverpool and Manchester.
- **Crewe to Stoke Line Capacity Improvements:** A review of opportunities to increase line capacity between Crewe and Stoke to further development potential for Crewe rail hub;
- **Chester to Wrexham Line Improvements:** A study into further opportunities to increase line capacity between Chester and Wrexham;
- **Liverpool - Chester Improvements:** Looking at opportunities for improving journey times and frequency of services;

- **Warrington Bank Quay Station:** creating a nationally significant rail hub at Warrington Bank Quay Station;
- **Mid-Cheshire Line Improvements:** Study to consider the options for increasing the frequency of trains on this route. This would include looking at the opportunity to reopen the Middlewich line to passengers including potential stations at Middlewich and Gadbrook Park, supporting its future expansion.

Strategic Road Network

Highways England is a government-owned company with responsibility for the operation, maintenance and improvement of the motorways and trunk roads in England. This network is known as the Strategic Road Network (SRN)

Priorities for Scheme Development

We will work with Highways England to identify network constraints which need to be addressed to support the doubling of the economy and support growth in the SEP areas of focus. Below are the priorities identified within the sub-region that we need Highways England to deliver during their Road Investment Strategy period 2 (2020-2025):

- **M6 J16 Grade Separation:** Creation of a direct link through M6 J16 connecting Crewe and Stoke on the A500 corridor.
- **M6 J17 improvement:** Short term capacity improvement to M6 J17 to address this pinch point and improve air quality.

- **M6 J19 improvement:** Scheme to increase capacity and accommodate growth.
- **Smart Motorways:** Roll out of smart motorway technology to M6 (Junction 19 to 21a), M56 and M53 to improve journey time reliability and incident management.

We have identified the following priorities for developing solutions for delivery in the medium to longer term :

- **M6 to A55 Connectivity Study:** A study to consider options to tackle capacity constraints, network resilience and journey time improvements between the M6 and A55 along the A51 corridor.
- **M6 Capacity Study:** A study of longer-term capacity improvements for the M6 between J16 and J22.
- **M62 Capacity & Junction Improvements:** Development of a business case for capacity improvements on the M62, between J8 and J12.

Major Road Network

The Major Road Network (MRN) for the North is defined by Transport for the North as “the road network that is most economically important to securing the North’s productivity and growth; both now, and in the future and comprises the SRN plus a network of significant A roads which are operated and maintained by the local highway authorities. This section sets out identified priorities for the local authority operated A road element of the MRN.

Schemes under Development

- **Congleton Link Road:** New road to alleviate congestion through Congleton town centre, and open up land for development to the north of the town.
- **Middlewich Eastern Bypass:** The eastern bypass will address some of the congestion issues through the town whilst facilitating growth of the Midpoint 18 employment site.
- **Warrington Western Link Road:** New road to link A56 to A57, reducing town centre congestion and improving north-south accessibility.

A500 Dualling: Scheme: Scheme to increase capacity on the A500.

Priorities for Scheme Development

- **Chester Western Relief Road:** development of a relief road to relieve congestion on the inner ring road and provide access to new development.
- **South Macclesfield Link Road:** Construction of a new road to facilitate the delivery of the South Macclesfield Development Area.
- **North Crewe Link Road:** Facilitating development and addressing existing congestion on the corridor between the A530 and A534 between Leighton Hospital and Crewe Green;

Local Transport

Improving Bus Services

A well-managed bus network provides an adaptable and effective means of serving communities, whilst also providing a gateway to the wider transport network. Within Cheshire and Warrington, local bus services provide vital short to medium distance travel, especially for people with limited access to a car and restricted mobility. Accessibility by bus can make a significant contribution to linking the sub-region's population to key urban centres and in reducing car use for local trips.

The introduction of the Bus Services Act provides new opportunities to establish a more output focused and joined-up way of managing the bus market. New approaches based upon the principles of partnership have the potential to deliver improvements through a more flexible and collaborative process.

To support the growth of the economy the local authorities, supported by the LEP, will need to work with the bus companies to explore a range of solutions for making bus travel more attractive including land-use planning to ensure that developments help provide the critical mass necessary to make bus services viable, improved ticketing, real time journey information, bus priority measures, service patterns and service frequencies.

Improving Local Highway Infrastructure

This section highlights some of the emerging short-term priorities of the 3 local authorities.

Schemes under Development

- **A51/A54 Pinch Points:** Local Growth Fund scheme to address pinch points on the A51, including Barrow Lane junction, and in Chester. Schemes are focused on addressing congestion and facilitating access to housing sites.

Priorities for Scheme Development

Each of the three local authorities are developing a range of schemes to provide local highway and transportation improvements including enhancing town centre access, facilitating development access and addressing pinch points. Examples include:

- **Crewe HS2 Hub Station Access Improvements:** Multimodal access improvements to Crewe Hub.
- **Chester Pinch Point Schemes:** Implementation of phase 1 schemes as part of a wider package of interventions to enable the delivery of housing sites;
- **Poynton Relief Road:** The relief road will alleviate congestion through Poynton town centre and other congested corridors. It will also connect to the A6 MARR scheme.
- **Ellesmere Port Central package:** Completion of phase 1 measures to support

development in the town centre and surrounding area.

- **Warrington East Phase 2:** Implementation of a package of improvements on A574 Birchwood Way; and
- **Omega Local Highway Schemes:** A package of highway improvements to serve the Omega development site.

We are also proposing two studies to identify schemes for medium to longer term delivery:

- **Mid Cheshire Towns Study Phase 2:** The study will consider the longer-term and a wider study area. It will also assess the requirements of road and public transport access to the HS2 hub at Crewe.
- **Ellesmere Port:** Study to be commissioned to look at transport and access opportunities for Ellesmere Port.



Monitoring Performance

Measuring performance will be a central aspect of delivering the Strategy. Performance is to be measured using Key Performance Indicators (or metrics) linked to Conditional Outputs which are focused on identifying transport's contribution to economic performance.

The following tables identify outputs that could be used to monitor performance. The outputs are largely based upon the Conditional Outputs identified by TfN as part of work to develop the evidence base for the Strategic Transport Plan.

Conditional Outputs: Road Network (to include SRN and MRN)¹

Conditional Outputs	Metrics	Data Source
Reliability	- % of Acceptable Journeys: Car; LGV/HGV	Traffic Master
Efficiency	- Minutes of delay per hr: Car; LGV/HGV	Transport User Survey
	- Vehicle occupancy in peak hours	
	- % of Network that is Adaptive	
Resilience	- # of road closure events per annum on defined corridors of MRN	HE/LHA
Journey Quality	- Business Perceptions of Journey Information Provision and Road Condition	Transport User Survey

¹Initial Major Roads Report Strategic Transport Plan Evidence Base (2017) Jacobs on behalf of TfN

Conditional Outputs: Rail²

Conditional Outputs	Passenger	Freight
Connectivity	- Proportion of population/catchment within 60 / 90 mins of economic centres	- Freight journey times - Number of freight paths - Ease of freight transfer
Capacity	- Crowded minutes on rail services	- Total rail freight capacity (in relation to demand)
Coherence	- Journey time reliability - Quality of service (NTS)	- Journey time reliability - Consistency of provision
Cost Effectiveness	- Operating costs per vehicle km - Operating costs per passenger km - Revenue per passenger km	- Unit rates for transferring goods - Transit times

²Initial Integrated Rail Report Strategic Transport Plan Evidence Base (2017) Steer Davis Gleave on behalf of TfN

Draft Conditional Outputs: Local Transport

Conditional Outputs	Metrics	Data Source
Reliability	- Journey time reliability (car) - Public transport journey time	- Traffic Master - Bus Operators
Efficiency	- Minutes of delay per hr: Car; LGV/HGV; buses	- Traffic Master - Bus Operators
	- Vehicle/bus capacity and occupancy in peak hours	- Transport User Survey - Bus Operators
	- Levels of cycling and walking	- Levels of cycling and walking to work / education.
Resilience	- # of road closure events per annum on roads	- LHA
Journey Quality	- Business Perceptions of Journey Information Provision and Road Condition	- Transport User Survey
Safety	- People KSI	- STATS19 data
Access for all	- DDA compliant vehicles and infrastructure	- Local Authorities, Network Rail, and bus operators.