Shropshire Council

Shrewsbury North West Relief Road

Economic Narrative

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Context

1 Context

1.1 Introduction

1.1.1. This Economic Narrative has been developed as part of the Full Business Case (FBC) for the North West Relief Road (referred to hereafter as the scheme or NWRR). The purpose of the Economic Narrative is to articulate why the transport investment is needed to achieve specified economic objectives and how it is expected to achieve these.

1.1.2. Through this process, this narrative defines the scope of the analysis in terms of the impacts of the scheme that are being considered and the mechanisms through which these are expected to occur. It provides a link between the economic objectives (and constraints) in the area, how these can be supported by the NWRR, the types of economic impacts expected as well as the impacts that are considered in the Economic Dimension. The narrative provides an insight into the economic context of the scheme and covers the following:

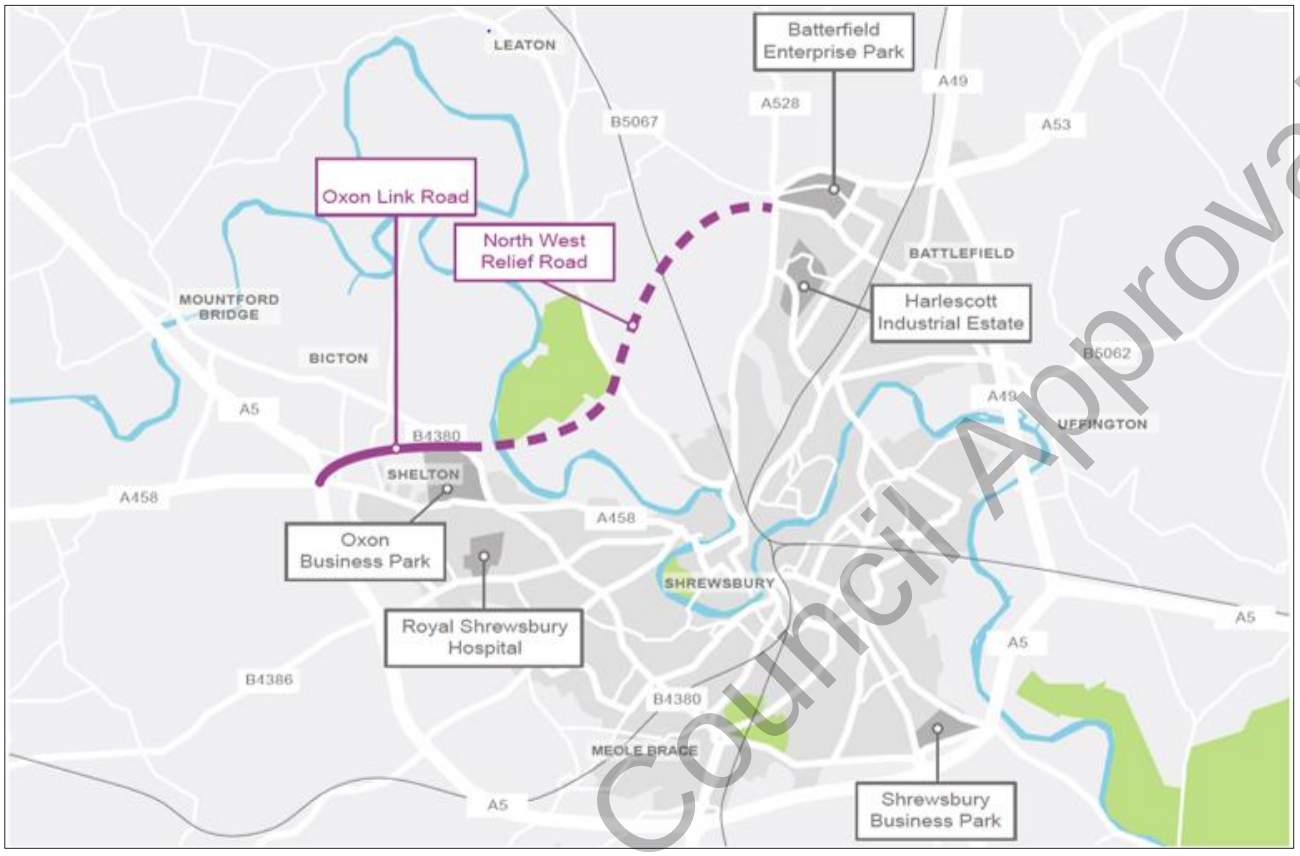
- Scheme description
- Local economic context
- Transport links within the area
- The expected impacts of the scheme

1.2 Scheme Description

1.2.1. The NWRR scheme is located in the north-west of Shrewsbury as shown in Figure 1-1. As proposed in the FBC, the scheme will comprise the following:

- A 7.3m wide single carriageway all-purpose 4.85km long road with 1.0m margins and a permitted speed limit of 60 mph, located in the north-west of Shrewsbury connecting the eastern end of the proposed Oxon Link Road (OLR) with the western end of the existing Battlefield Link Road that provides access to the Battlefield Enterprise Park
- The NWRR will be bounded on both sides by open space and will include a shared 3m wide footway / cycleway along the length of its southern side, addressing the severance of a number of local roads, footpaths and Public Rights of Way (PRoW)
- Construction of a 36.4m long equestrian culvert to divert the existing bridleway just to the east of the B4380 Holyhead Road Roundabout under the NWRR, maintaining connectivity for pedestrians, equestrians, mammal and bats
- A 15.5m wide viaduct, approximately 584m in length, crossing the River Severn and its flood plain
- Two additional flood storage areas will be provided as a result of the works impinging the existing flood plain
- Combined culvert and mammal crossing points at Willow Pool and along the line of both Alkmund Stream and Hencott Stream
- Landscaping, drainage schemes, increased flood storage, planting, and environmental mitigation work including the acquisition of Hencott Pool to enable habitat improvements
- Provision of a new at-grade four arm roundabout located on the B5067 Berwick Road to provide an interface between the NWRR and the B5067 Berwick Road
- A vehicular bridge to carry the NWRR over the Shrewsbury to Chester railway line
- Construction of an overbridge to carry the Marches Way Footpath and Accommodation Track over the NWRR, providing connectivity for a number of public rights of way in the area
- Replacement of the existing at-grade five-arm A528 Ellesmere Road roundabout with two at-grade four-arm roundabouts in a ‘dumb-bell’ configuration

Figure 1-1 - Proposed NWRR Location



1.3 Local Context

1.3.1. Shrewsbury is a historic market town in the county of Shropshire and occupies a total area of 23km². It is located 47 miles west of Birmingham and 12 miles east of the border with Wales. Shrewsbury is the principal town and administrative centre of Shropshire, while also serving as a cultural and commercial centre for Shropshire and a large area of mid-Wales.

1.3.2. As of 2021, Shrewsbury had a population of just under 76,000, an increase of 7.0% from 71,000 compared to the 2011 census. At the same time, the population of Shropshire increased by 5.7%, from just over 306,100 in 2011 to around 323,600 in 2021. Shrewsbury is a major employment hub, service provider; health, commercial and cultural centre for Shropshire, and has a large rural hinterland of approximately 2.6 million people who live within 1 hour travel time (including parts of mid-Wales). Shrewsbury lies at the intersection of the A5, A458 and A49 (south) trunk roads, and is the focal point for other principal roads: the A53 (north), the A458 (east) the A488 (west) and the A49 (north).

1.3.3. Shrewsbury's defining physical characteristic is an almost complete natural loop of the River Severn, within which the medieval town developed. The river loop still encloses the present-day town centre, which has just three main points of entry by road and a largely unaltered medieval street pattern. Present day Shrewsbury extends over a much wider area with suburban development, mainly from the 19th and 20th centuries, extending outward from the river loop.

1.3.4. The suburbs of Shrewsbury form a broad crescent from Harlescott in the north to Copthorne and The Mount in the west. Within this crescent lie the main schools, colleges, hospitals, and public and

private sector employment areas. By contrast, the north-west sector of Shrewsbury is generally undeveloped and is mainly comprised of agricultural land. Settlements are sparse, with small, isolated farmsteads and properties scattered through the landscape. The River Severn meanders through this area with steep wooded valley slopes and extensive floodplains. The river forms one of the main physical barriers dividing the landscape. The area is crossed by the Shrewsbury to Chester railway line, and by footpaths and other PRoW.

1.3.5. Shrewsbury is well connected to the West Midlands and the national motorway network, and there are good connections into, within and between the north-east and south-east suburbs and the south-east and south-west suburbs. However, the north-west quadrant of the town is neither well connected nor developed. Currently, links between the northern and western parts of Shrewsbury are very poor with north-west corridor through traffic having four main route options involving passing through the town centre, using the inner distributor ring road, the full length of the existing A5 / A49 outer bypass, or unsuitable and narrow local roads to the north-west of the town.

1.3.6. Together with the A5 and A49 bypasses, the Battlefield Link Road and the planned OLR, the NWRR will provide the 'missing link', completing the full ring of the outer bypass of Shrewsbury and providing north-west corridor through traffic with a new shorter and more direct route.

2

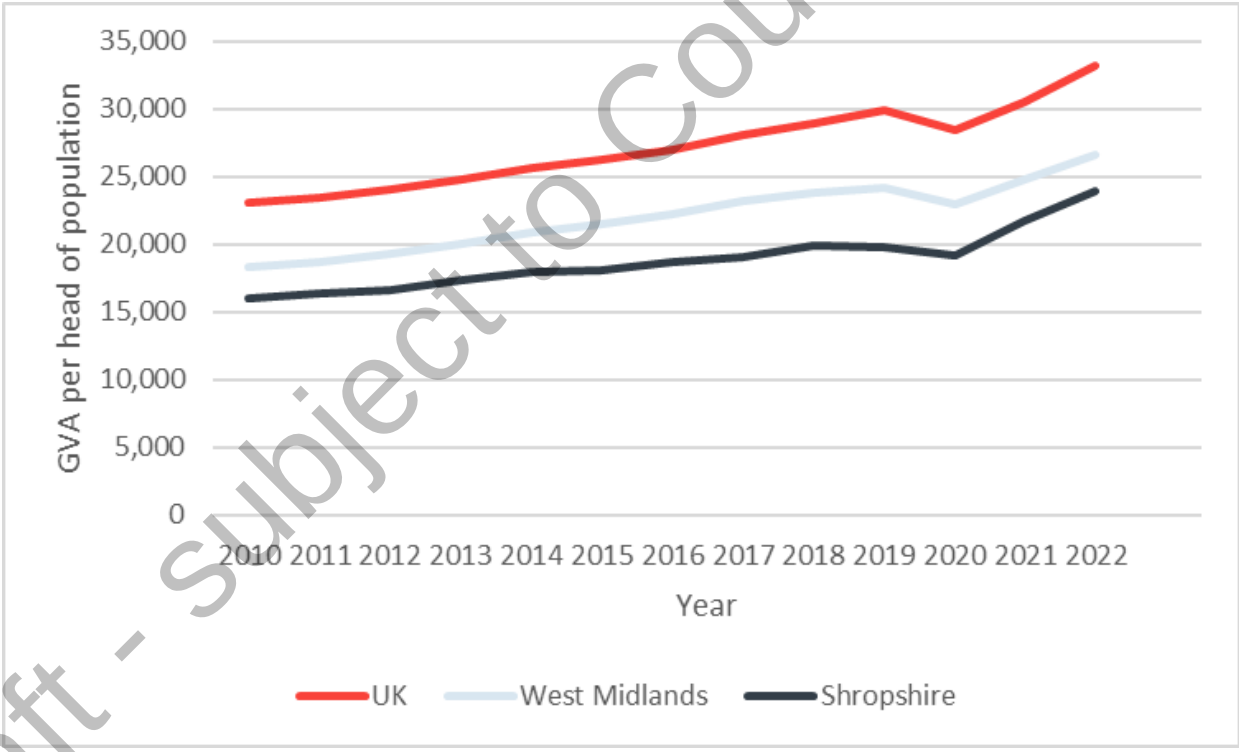
Economic Context

2 Economic Context

2.1 The Economy of Shropshire

2.1.1. Shropshire is an affluent county, generally with lower levels of deprivation and unemployment than the national average. However, Shropshire has lower gross weekly earnings (a productivity measure) than the national average. The county's unemployment rate is lower than the national average (3.1% compared to 3.9%), however, there is an overrepresentation of low wage, low skilled jobs. The productivity gap between Shropshire and the national average is demonstrated by ONS data. Figure 2-1 below shows how the Gross Value Added (GVA) per head of population has been changing for Shropshire in comparison to the West Midlands region and the whole country. The GVA per capita in Shropshire has remained lower than for the whole of England and also below the levels in the whole West Midlands. In Shropshire, GVA of £26.60 per hour worked was generated in 2019 – this is £9.20 (34.6%) less than the national average and £5.20 (19.5%) less than in the West Midlands.

Figure 2-1 - Gross value added (balanced) per head of population at current basic prices (ONS)



2.1.2. The Shropshire labour force is comparatively well skilled in relation to the West Midlands as a whole, with a higher proportion of individuals holding at least a NVQ level 3 qualification (58.4% compared with 51.9%) and half as many holding no qualifications at all (5.4% compared with 10.3%). However, despite high and rising qualification levels in Shropshire, skills are not always aligned to the needs of businesses. This is reflected in an analysis of skills shortage data, which suggests 13% of Shropshire businesses either have skills gaps within their existing workforce, skills

shortage vacancies, or both. Shropshire's Economic Growth Strategy aspires to grow and diversify Shropshire's future labour force to support local economic growth.

2.1.3. Shropshire primarily supports a small-business economy. Self-employment is high and significant numbers of people work either from home or run businesses from home. Comparatively, there are few large employers, with employment mainly concentrated in Shrewsbury, and the market towns of Oswestry, Market Drayton, Whitchurch, Bridgnorth and Ludlow. The local economy is under-represented in private sector services including professional, scientific and technical, and finance and insurance services. The economy of Shropshire is dominated by the services and production (agriculture) sector. The health, retail, accommodation and food sector employ the greatest number of people although a high proportion of them are part-time roles.

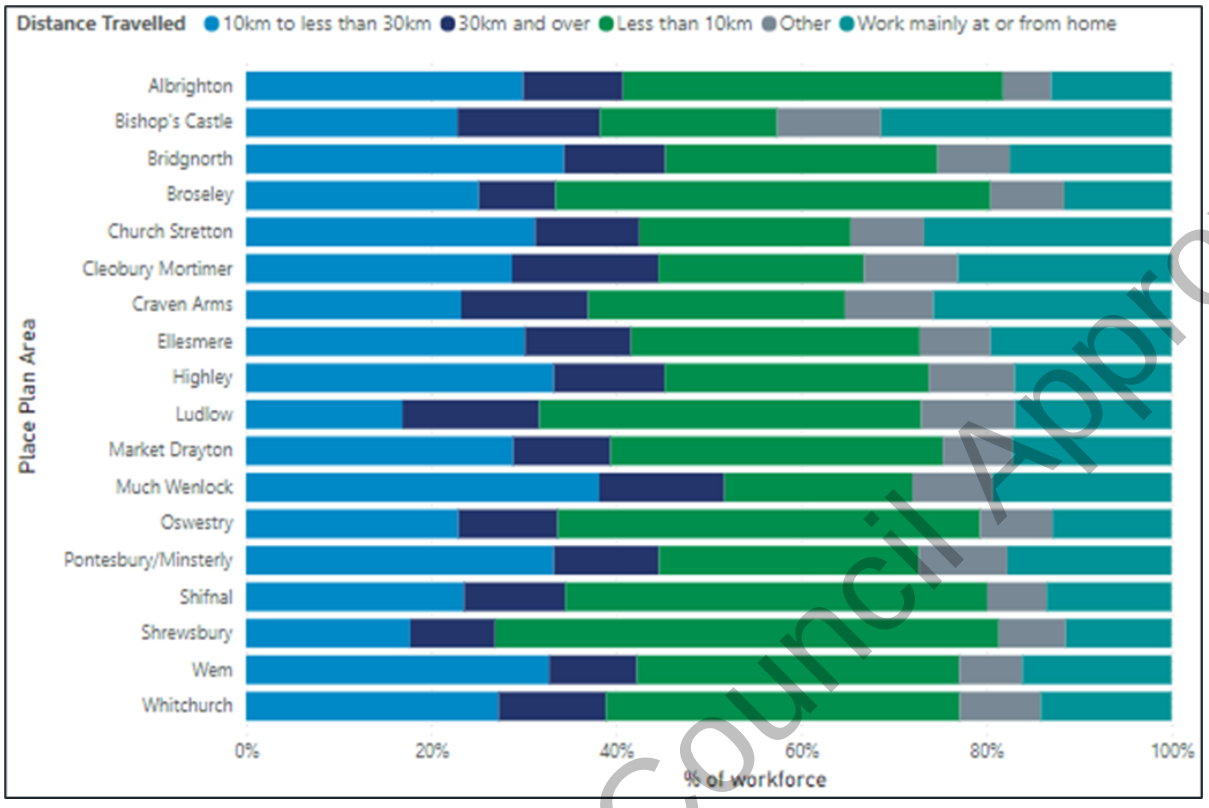
2.1.4. Shrewsbury town centre has an overreliance on retail, has limited employment sites and a lack of opportunities for commercial office space. There is also a lack of availability of suitable development land within the town centre with a river loop that is constraining economic growth. The extensive medieval street network in Shrewsbury also constrains connectivity, leading to significant perceived and actual impediments for both commercial, and residential development interest in the area.

2.1.5. Shropshire has more residents than it does jobs and consequently out commuting is significant within the county, reflecting opportunities for Shropshire residents close to employment attractors in other parts of the West Midlands region. The tendency to out commute is more prevalent among higher earners. For example, 16.4% of Shropshire's working residents with at least NVQ level 4 qualifications travel 30km or further to work, compared with an average of 10.8% across all workers in Shropshire.

2.1.6. Despite the wider county trend of out commuting from Shropshire, Shrewsbury is the principal employment centre in Shropshire and is the main location of businesses and jobs in the central part of the county. Many residents commute to work in Sundorne, Sutton Park and Harlescott, all within the outer ring road (the A5 and A49).

2.1.7. Those living in central Shropshire, especially those in Shrewsbury, have easier access to employment than their more rural counterparts. Access to larger employment hubs is particularly challenging in the south west of the county. 2011 Census data, as presented in Figure 2-2 shows the distance travelled to work by % of the workforce. Shrewsbury has the highest proportion of the workforce travelling less than 10km to their workplace (54.42%).

Figure 2-2 - Percentage of workforce by place plan area and distance travelled



2.1.8. As stated in the Council's Draft Housing Strategy (2020-2025), approximately 39% of Shropshire's population live in villages, hamlets and dwellings dispersed throughout the countryside. The remainder of the county's population live in one of the 17 market towns and key centres. This includes Ludlow and Bridgnorth in the south, Oswestry, Whitchurch and Market Drayton in the north, and Shrewsbury, the central county town, each with populations in excess of 10,000 people. Shropshire's housing affordability ratio has increased from 7.22:1 in 2013 to 8.45:1 in 2023, indicating that houses are becoming less affordable in Shropshire. This emphasises the need for an adequate supply of housing, and affordable homes, to meet the needs and aspirations of Shropshire's population and to support local economic growth. Shropshire's housing affordability ratio was also higher than the national average and significantly higher than the West Midlands average in both 2013 and 2023, amplifying the above issues.

2.2 Existing Transport Infrastructure and travel patterns

Road Network

2.2.1. Shropshire has a road network with approximately 5,100km of carriageway and is easily accessible by road (including the A5 / M54 motorway). Shrewsbury is well connected by road to the West Midlands and the national motorway network. Shrewsbury is the main transport hub for the county, providing access throughout the county and beyond but it can also act as a constraint if longer distance journeys need to navigate through or past the town.

2.2.2. Figure 2-3 below clearly shows the current lack of available highway infrastructure between the north and west of Shrewsbury.

Figure 2-3 - NWRR in relation to the Strategic Road Network and local 'A' roads

2.2.3. Out of the 5,100km of roads in Shropshire, more than 3,300km are rural class C or unclassified roads providing important links between the dispersed rural communities. The A and B roads provide strategic links through the county and into neighbouring areas. The condition of the roads across the county has been assessed as average, although there are concerns about the condition of some of the minor roads, where the road surface is deteriorating. The Council is responsible for 1,010 bridges/culverts, approximately 1,500 retaining walls and 50 cattle grids. The condition of the bridges is generally good and the Council has an ongoing programme of assessment of the walls.

2.2.4. The M54/A5 corridor carries the highest volumes of traffic in the county, providing a key east-west corridor and strategic gateway to the county. Other high trafficked routes include the A5 Shrewsbury ring road, the A5 between Shrewsbury and Oswestry, the A49 between Shrewsbury and Whitchurch, the A53 between Shrewsbury and Market Drayton, the A49 Between Shrewsbury and Church Stretton, and the A458 between Shrewsbury and Bridgnorth. Higher proportions of freight movements (HGVs) are observed along the A41 and A49 in the north of the county. Peak hour traffic congestion occurs in some locations on key routes and in some of the key town centres, particularly Shrewsbury, especially at the northern and western approaches to the town. This traffic has to either pass through the town centre or take the longer, alternative route around the A5 and A49 by-passes, adding to congestion within the town centre or on the Strategic Road Network particularly at key by-pass junctions. Increased levels of congestion lead to longer and less reliable journeys, increased monetary costs of travel as well as negative external environmental impacts.

2.2.5. The M54/A5 corridor serves as a key east-west road and strategic gateway for both Shropshire and its neighbouring local authorities. It is identified locally and regionally as a key growth Corridor for both employment and residential development, resulting from the strong transport links and from the presence of regionally significant education, training and employment opportunities.

2.2.6. Currently, links between the northern and western parts of Shrewsbury are very poor with north-west corridor through traffic having four main route options involving passing through the town centre, using the inner distributor ring road, the full length of the existing A5 / A49 outer bypass, or unsuitable and narrow local roads to the north-west of the town. The NWRR will provide the 'missing link', completing the full ring of the outer bypass of Shrewsbury. As north-west corridor through traffic transfers to this new route, the existing north-west corridor through route options will all experience lower flows and congestion levels. Other journeys within and around the town will also be able to transfer to more appropriate routes within the town's road hierarchy, reducing journey times and increasing the capacity and resilience of the local and strategic highway network. In addition, with the outer bypass ring complete, all long distance through journeys will be able to bypass the town completely and vehicles will have the choice of travelling in either direction around the outer bypass based on their optimal route, helping to smooth flows out during periods of peak demand, reducing congestion levels, improving journey times and enabling the entire transport network to operate more efficiently and reliably.

Public Transport

2.2.7. There are 16 National Rail stations across Shropshire. Shrewsbury itself acts as a rail hub with easy access to Wales, Cheshire, the West Midlands, as well as to London and beyond. Shrewsbury's bus network operates on a hub and spoke type network, with routes radiating out from the town centre. However, there is lack of bus priority measures, meaning that buses have to share local roads with general traffic. Therefore, when there is congestion, bus services are also delayed making services, including the Park and Ride services, inefficient and unreliable and more expensive to operate, further reducing the attractiveness of this more sustainable mode of transport.

2.2.8. The number of amenities and facilities accessible by public transport is generally lower than the national average. Access to employment via public transport is substantially lower than the national average. The majority of Shropshire residents (87%) have access to a bus stop within a 10-minute walk, but only 7% have access to a railway station within a 10-minute walk.

Active Travel

2.2.9. Shropshire has the third longest Rights of Way network in England. There are approximately 2,900km of cycle routes, 965km of byways and bridleways and 4,380km of public footpaths in Shropshire. The number of amenities and facilities within ready walking distance (up to 20 minutes, between 1.2 and 1.6km) is much lower than the national average. However, 56% of Shropshire residents live within a 15-minute cycle of a district centre where amenities and facilities are concentrated.

2.2.10. The majority of footways and cycleways are in urban areas, but footways in rural areas provide important links between villages. Less than 5% of footways have been classified as functionally or structurally impaired. In Shropshire, there are about 170km of signed paths and routes which are part of the National Cycle Network, as well as 385km of cycle paths (separate dedicated cycle routes). A network of on-road cycle lanes is also present in the main towns. The network of cycle infrastructure is limited, however, and not necessarily well connected.

Travel to Work

2.2.11. For those travelling to work, the dominant means of travel is by car or van, either as a driver or passenger. In Shropshire, the proportion of people using a car or van to travel to work is higher than the national average. The proportion of journeys to work in Shropshire that are more than 20km (21%) is twice the national average (10%). Conversely, 1 in 4 journeys to work in the county is less than 5km.

2.2.12. The dispersed communities in Shropshire and the focus of employment in the main towns mean that distances to travel to work are greater and influence the choice of travel. Limited availability of public transport options means that cars and vans become the main travel choice. Car ownership in Shropshire is higher than the national average, with only 14% of households having no car or van. Car ownership has also continued to increase over the last 20 years. The proportion of households with 2 or more vehicles is also higher than the national average. Despite a high level of car ownership at the household level, at any one time, there is a "non-driver" population without access to a car (including children and adults) of around 139,000, representing 42% of the total population.

2.2.13. The levels of car ownership and the nature of journeys to work and to access services and facilities mean that the private vehicle will likely continue to dominate travel choices and providing alternatives to travelling by private vehicle may be challenging.

Public Policy in Relation to the Scheme

2.2.14. The proposed NWRR scheme is closely aligned to relevant national, regional and local level legislation, policy, plans and strategies. This is most notable regarding how the transport infrastructure investment will support planned housing and economic growth as well as improving connectivity. Full details of the scheme's alignment can be found in the Strategic Dimension of the FBC, with an overview shown in Table 2-1.

Table 2-1 - NWRR Alignment to Public Policy

Level	Strategy/ Plan	NWRR Scheme's Involvement
National	National Planning Policy Framework (NPPF)	Sets out the Government's planning policies for England and how these should be applied. Among its objectives are the desire to help build a strong, responsive and competitive economy to support health and vibrant opportunities, partly by identifying and coordinating the provision of infrastructure. The NWRR will support this through enhanced connectivity.
	Strategic Road Network and the Delivery of Sustainable Development	Details the importance of the Strategic Road Network (SRN) for enabling safe, reliable, predictable, efficient journeys between main population centres, major ports, airports and rail terminals. The NWRR will significantly enhance the resilience of the SRN through providing an alternative link between the northern and western parts of Shrewsbury.
	Levelling Up the United Kingdom White Paper	The Government's policy regime to address the unequal distribution of opportunity and socio-economic outcomes associated with where people live and work. The NWRR represents a transport scheme that

Level	Strategy/ Plan	NWRR Scheme's Involvement
		will boost local growth and productivity through enhanced connectivity.
Regional	Strategic Transport Priorities for The Marches	This document sets out the strategic transport priorities required for growth to ensure a bright future for the region, highlighting the importance of rail and road links, technology and innovation.
	The Strategic Transport Plan for the Midlands	Sets out how the region will be a valuable partner in helping the Government meet its primary challenges of levelling up, decarbonisation and supporting the nation's post COVID-19 recovery. The Plan highlights the importance of Shrewsbury as one of the Marches' three urban centres and the economic opportunities associated with the NWRR.
Local	Shropshire's Economic Growth Strategy	A key activity outlined in this Strategy is the need for investment in strategic infrastructure. The NWRR will directly improve the accessibility of the Battlefield Business Park, facilitate the expansion of the Oxon Business Park and maximise the residential and employment development potential at the Shrewsbury West SUE.
	The Shropshire Plan	Aims to deliver long lasting success within the local area, with four priority areas including a 'healthy economy'. The NWRR will support this priority by improving connectivity to education and job opportunities as well as local housing.
	Shropshire's Economic Recovery, Transformation and Resilience Framework Committee Report	The framework outlines how Shropshire is well-placed to support and grow its natural assets and businesses in order to refocus economic growth. The delivery of the NWRR will help to reduce congestion and increase productivity, encouraging inward investment and helping to unlock development.

3

Impact of the Proposed Scheme

3 Impact of the Proposed Scheme

3.1 Introduction

3.1.1. The primary aim of the NWRR is to improve Shrewsbury as a place in which to live, work and invest, by reducing congestion to help unlock transformational change within the town centre. The specific, or intermediate, objectives of the scheme are:

- To improve connectivity and accessibility between the north and west of Shrewsbury for all modes
- To reduce traffic congestion across Shrewsbury
- To improve network efficiency, resilience and journey time reliability
- To reduce rat-running traffic on unsuitable rural roads to the north-west of the town
- To improve facilities for active transport
- To reduce the number of accidents and casualties on roads in Shrewsbury
- To minimise the greenhouse gas impacts associated with the scheme
- To improve local air quality in Shrewsbury town centre
- To support local economic growth and productivity
- To support the delivery of planned local housing growth and development
- To improve the quality of life for people in Shrewsbury

3.2 Impacts on Road Users

Journey times

3.2.1. The most immediate impact of the NWRR will be the impacts on road users and their day-to-day journeys. Together with the A5 and A49 bypasses, the Battlefield Link Road and the planned Oxon Link Road, the NWRR will provide the 'missing link', completing the full ring of the outer bypass of Shrewsbury and providing north-west corridor through traffic with a new shorter and more direct route. Shorter journeys will benefit those commuting, the movement of freight and goods, local residents and those travelling for leisure. These impacts are, however, not only limited to user benefits as reduced journey times will also have wider positive impacts on the economy, as discussed further below.

Reliability

3.2.2. Delivery of the NWRR will significantly reduce journey times for north-west corridor through traffic and, as through north-west corridor traffic diverts to the new link, journey times will reduce across and around the town as the existing roads perform more optimally and congestion levels reduce. The NWRR will also enhance Shrewsbury's inter-urban connectivity by reducing congestion along the A5, part of the SRN, ensuring faster, more reliable journeys to and from the West Midlands and national motorway network.

3.2.3. Reduced journey time variability day to day, particularly during peak periods, will allow users to better predict their journey times, this will also reduce the overall costs associated with use of the local road network. This improved journey time reliability will also boost productivity and support local economic growth.

Accidents

3.2.4. The NWRR is expected to reduce traffic on the north-west corridor through the town centre, therefore it is reasonable to expect that this will lead to a proportional reduction in collisions on these

routes, including those involving pedestrians or cyclists. It is also expected that as the NWRR will attract some traffic currently travelling between the north and west using the outer bypass or the inner distributor ring, therefore a proportional reduction in collisions is also expected on these roads. In addition, as the NWRR and combined 3m wide footway and cycleway adjacent to the carriageway are purpose built to modern standards, this should also contribute to a reduction in the frequency and severity of accidents in Shrewsbury.

Active Mode Users

3.2.5. The shared 3m wide footway and cycleway that will be provided adjacent to the southern side of the carriageway will help to facilitate the increased use of active modes and address the severance. This is likely to encourage more active travel uptake as well as improve travel conditions for existing users who will also benefit from reduced severance.

3.3 Environmental Impacts

3.3.1. The transfer of north-west corridor through traffic from routes passing through the town centre to the NWRR will reduce traffic volumes and congestion on both the northern and western approaches and on the Station Gyratory and Smithfield Road within the town centre. This will, in turn, have an impact on the noise, air quality and greenhouse gas emissions. Additionally, some positive environmental impacts may be expected due to the mode shift to active modes. Apart from the environmental impacts related to scheme users, there might be additional impacts related to scheme construction, operation, and maintenance.

3.3.2. The scheme is also expected to have non-traffic related environmental impacts, i.e. those that arise from physical changes to the environment brought about by the proposed transport infrastructure. Construction of the NWRR is expected to have additional impacts on landscape, townscape, biodiversity, historic environment and water environment.

3.4 Wider impacts

3.4.1. The delivery of the NWRR is expected to result in further impacts beyond the direct transport impacts, affecting economic performance. Such impacts are expected to arise due to market imperfections and market failures and are not captured within the traditional analysis of transport user benefits as the impacts arise in the secondary (non-transport) markets. These impacts can be related to induced investment, employment effects and/or productivity impacts. The NWRR scheme is expected to help increase productivity by reducing the amount of resources needed to achieve the same outputs, promoting investment and innovation, increasing labour supply and density of economic activity.

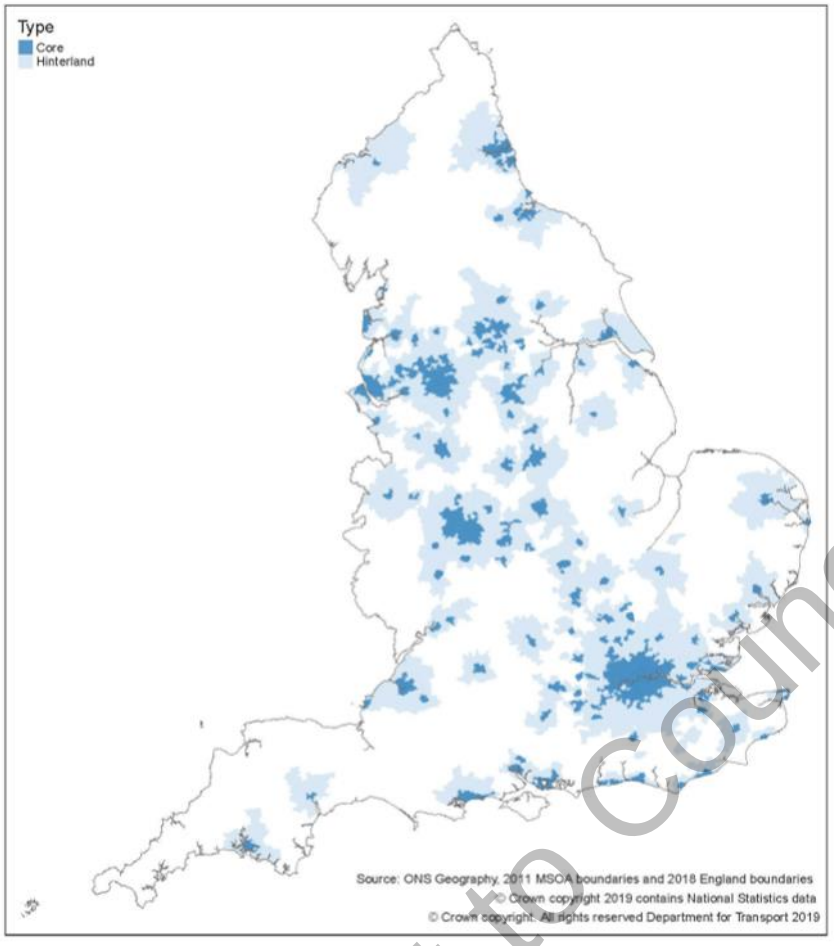
3.4.2. The change in generalised travel costs (GTCs), observed in the transport markets, which is expected to be one of the key impacts of the proposed scheme, will not only reduce journey times for transport users. The reduction in GTCs acts to raise productivity, as activities can be completed with fewer resources (time and financial). Hence, if these impacts accrue to businesses, this will directly impact economic performance (productivity increases). GTC reductions are transmitted to secondary (non-transport) markets, as households and businesses change their behaviour in response to the new opportunities. The behavioural responses, such as induced investment and employment effects, may lead to changes in the level and location of economic activity.

3.4.3. The removal of traffic and the resulting improved traffic conditions in the Shrewsbury town centre may positively impact the population living and commuting to and from Shrewsbury. It is recognised that investment in enhanced transport links and infrastructure is essential to ease the additional pressures and congestion on Shropshire's transport network and unlock future housing, and economic growth. The NWRR will enhance access to the Shrewsbury West SUE by extending the OLR across the River Severn, creating a shorter and more direct link between residential development in the Shrewsbury West SUE and the employment sites to the north of Shrewsbury, such as the Battlefield Enterprise Park. As the proposed changes may increase the attractiveness of the town centre due to the reduction of through traffic, this may further support the development of economic activity in Shrewsbury, making it a better place to live, work and invest.

3.4.4. TAG Unit A2-4 highlights that productivity impacts are most likely to occur when schemes are located within or neighbouring a 'Functional Urban Region' (FUR), as these regions contain a high density of economic activity that could benefit from improved connectivity and clustering. England's FURs are shown below in Figure 3-1.

3.4.5. The FURs across England are constructed by identifying a core area, and a corresponding commuting field (or hinterland) for that core. Shrewsbury town centre and three neighbouring MSOAs to the north and west of the town are defined as the core FUR, and the north west region of Shrewsbury (MSOA encompassing Bomere Heath to the north and Westbury to the west) is defined as the hinterland region. It is expected that the NWRR will enable the businesses to cluster closer together and allow them to interact more and share knowledge with one another. Considering GVA per hour worked as one of the indicators of productivity, Shropshire currently lags behind the regional and national average. It is anticipated that the NWRR will increase productivity and this is likely to be mainly through static clustering with the NWRR better connecting businesses.

Figure 3-1 - Functional Urban Regions in England



3.5 Economic Appraisal Methodology

3.5.1. The impacts of the scheme identified in the previous section will be appraised using quantitative and qualitative techniques, using established methodologies based on DfT's three levels of analysis as detailed in Table 3-1with further details provided in the Appraisal Specification Report.

3.5.2. The three levels of analysis are differentiated based on the maturity of the analytical techniques:

1. Level 1 – Established Monetised Impacts, including user benefits (such as monetised journey time savings and accident reduction benefits) that assume fixed land use with no feedback effects from secondary markets (i.e. excluding wider economic impacts);
2. Level 2 – Evolving Monetised Impacts with inclusion of journey time reliability and wider economic impacts without explicit land use change (connectivity impacts); and
3. Level 3 – Non-monetised impacts, including environmental and distributional impacts as assessment of structural impacts, explicitly quantifying land use change impacts will not be undertaken.

Table 3-1 - Economic impacts and appraisal methods

Analysis level	Scheme impacts	Selected appraisal method	Rationale
Level 1 Initial BCR	User benefits (car users)	*Monetised*-Transport Users Benefit Appraisal ("TUBA") software applied to the results of Strategic Transport Model to capture changes in journey times (including impacts of road maintenance) and vehicle operating costs.	NWRR is expected to have a significant impact on journey times, providing a more direct, shorter link for the north west corridor through traffic.
	Active Mode Users	*Monetised*-Active mode appraisal using the DfT's Active Mode Appraisal Toolkit (AMAT).	Proposed walking and cycling infrastructure improvements will likely induce mode shift to active modes as well as improve travel conditions for current active mode users.
	Safety	*Monetised*-Cost and Benefit to Accidents – Light Touch ("COBALT") software applied to the results of Strategic Transport Model. Additionally, mode shift impacts quantified using AMATs.	Changes in the infrastructure provision and the resulting traffic levels as well as mode shift are expected to lead to a reduction in the frequency and severity of accidents.
	Noise, Air Quality and Greenhouse Gases	*Monetised*-Appraisal undertaken in line with TAG Unit A3 guidance on Air Quality Impacts; Mode shift impacts appraised using Active mode appraisal using the DfT's Active Mode Appraisal Toolkit (AMAT). Several bespoke tools for different impacts utilised, with the workings and results collated in WSP's Carbon Zero Appraisal Framework.	Changes in travel behaviour will have an impact on noise, air quality and greenhouse gas emissions. Similarly, environmental impacts of the scheme construction need to be considered.
	Indirect tax revenues	*Monetised*-TUBA software applied to results of Strategic Transport Model. Additionally, mode shift impacts quantified using AMATs.	Changes in travel behaviour may have an impact on the tax revenues received by the central government due to changes in fuel consumption.
	Costs to broad transport budget	*Monetised*-Scheme costs including investment, operating, maintenance and renewal costs brought together in a wider appraisal model and treated in line with TAG A1.2.	The costs related to developing and maintaining the scheme need to be considered.
Level 2 - Adjusted BCR	Journey time reliability	*Monetised*-Assessed using guidance in TAG A1.3, Section 6.3 for calculating reliability impacts on urban roads. Calculation of the standard deviation of journey times	The scheme is expected to ease congestion in Shrewsbury what will increase journey time reliability for travellers in Shrewsbury and the area.

Analysis level	Scheme impacts	Selected appraisal method	Rationale
		from modelled journey times and distances for each O-D (origin-destination) pair.	
	Wider economic impacts	*Monetised*-Assessment using WSP's WITA 2.0 emulator, following guidance in TAG Unit A2.1.	The scheme is expected to have wider impacts in the secondary (non-transport) markets as it will help increase productivity by reducing the amount of resources needed to achieve the same outputs, promoting investment and innovation, increasing labour supply and density of economic activity.
Level 3 - Non-monetised impacts	Social impacts	*Qualitative*-Assessment following guidance in TAG Unit A3 and A4.	There are likely further impacts that will not be quantified but are important to consider when assessing the scheme. These include impacts on security, access to services, affordability, severance, landscape, townscape, historical environment, biodiversity and water environment.
	Environmental impacts		

3.5.3. An Appraisal Summary Table and a Value for Money (VfM) statement will be prepared in line with TAG requirements. These will provide concise summaries of the economic, social, environmental and public account impacts that the proposed scheme may have to assess their strategic fit as well as the benefits and costs the scheme is likely to provide.

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